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MOLLUSCA

COMPILED BY

A. E. SALISBURY, A.M.I.E.E.

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5.—Anon. Species and vars. named after S. Hirase. [In Japanese.] Venus Tokyo 10 1 1940 pp. 14-15.

6.—Abbott, R. T. Handbook of medically important mollusks of the Orient and Western Pacific. Bull. Mus. Comp. Zool. Harvard 100 3 1948 pp. 243-328 text-figs., pls. 1-5.

7.—Abbott, R. T. A new Florida species of the Tectibranch genus *Pleurobranchus*. Nautilus Philad. 1949 62 3 pp. 73-78, pl. 5.

8.—Abbott, R. T. New Syncecid Mollusks from the Marianas Islands (Gastropoda, Prosobranchiata, Syncecididae). Occ. Pap. Bishop Mus. Honolulu 19 15 1949 pp. 261-274 text-figs.

9.—Abbott, R. T. Samoa, Shell-collector's paradise. Scient. Monthly, Lancaster, Pa. 1949 69 5 pp. 319-327 figs.

10.—Abrard, R. & Aubert de la Rue, E. Sur la présence du Quaternaire marin fossilifère la long de la Côte occidentale du Labrador. C.R. Acad. Sci. Paris 229 23 1949 pp. 1249-1251.

11.—Adam, W. Notes sur les Gastéropodes. XV.—Recherches sur la faune malacologiques des dunes littorales de la Belgique. Bull. Mus. Hist. nat. Belg. 23 27 1947 pp. 1-26 tables & text-figs. pl. 1.

12.—Agrell, L. The shell morphology of some Swedish Unionides as affected by Ecological conditions. Ark. zool. Stockholm 41 A15 1949 pp. 1-30 text-figs. tables & graphs.

13.—Aguayo, C. G. Nuevos moluscos fosiles de la Republica Dominicana. Revista Soc. Malac. 'C. de la Torre' Habana 1949 6 3 pp. 91-92.

Aguayo, C. G. *vide* Clench, W. J.

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15.—Albonico, R. Die Farbrarier-teiten der grossem Wegschnecke *Arion empiricorum* Fér und deren Abbarigigkeit von den Uncrochtbedingungen. Rev. suisse zool. Genève 55 3 1948 pp. 347-425 text-fig.

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18.—Alloiteau, J. & Charles, R. P. Quelques fossiles nouveaux ou peu connu dans le Lias de Provence. Mém. Soc. d'Études Paléont. Paethnogr. Provence 1 2 1948 p. 8.

19.—Alonso, A. S. & Castellanos, Z. J. A. de. Algunos datos sobre la alimentación de las Ampularias. Notas Mus. La Plata Zool. 14 115 1949 pp. 31-34 pls. i-iv.

20.—Altena, C. O. van R. Teyler's Museum—Systematic Catalogue of the Palaeontological collection, sixth supplement (Teuthoidea). Arch. Mus. Teyler, La Haye 1949 (3) 10 2 pp. 53-62 text-fig.

21.—Altena, C. O. v. R. The genus *Antemetula* Rehder in the Indo-West Pacific area, with description of two new fossil species. Bijdr. t. d. Direrck. Afr. 28 1949 pp. 305-393, 7 figs. [non vide].

22.—Altena, C. O. v. R. Slakken-kaartjes de grote rivieren als invasie-wegen van Nederlandse Landslakken. "In het voetspoor van Thijssse" 1949 pp. 266-270, 4 figs.

23.—**Althoff, W.** Die Ammoniten-zonen der Oberen Ludwegischichten von Bielefeld. *Palaeontographica Stuttgart A* **92** 1-2 1940 pp. 1-44 text-fig. pls. i-vi.

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27.—**Ancion, C., Leckiojck, W. van & Ubaglis, G.** Sur l'âge samennien des grès du Val Dieu et l'existence d'une lacune stratigraphique entre Namurien et Famennien dans la vallée de la Berwinne. *Bull. Acad. R. Belg. Cl. Sci.* 1943 (5) **29** pp. 488-492.

Andrusov, D. *vide* Kühn, O.

28.—**Anelli, F.** Specie nuove nella fauna Retica della Valle Adrara. *Riv. ital. Paleont. Milano* **55** 2 1949 pp. 73-77 text-figs.

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35.—**Aubert, D.** Nouvelles observations sur le niveau à *Exogyra virgula* dans de Jura. *Bull. Soc. Vaud. Sci. nat.* 1949 **64** 275 pp. 361-366.

Aubert de la Rue, E. *vide* Abrard.

Aveledo, R. *vide* Carbonell, L. & others.

36.—**Awati, P. R. & Karandiker, K. R.** *Oncidium verraculatum* Cuv. (Anatomy, Embryology and Bionomics). *Zool. Mem. Univ. Bombay* **1** 1948 pp. 1-53 text-fig.

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45.—**Bacci, G.** Ricerche sulla zoocenosi bentoniche del Golfo di Napoli. *Pubb. Staz. zool. Napoli* **20** 1947 pp. 158-178.

46.—Bacci, G. L'inversione del sesso ed il ciclo stagionale della gonade in *Patella coerulea* L. Pubbl. Staz. zool. Napoli 21 1948 pp. 183-217 tables & graphs text-figs. pls. vii, viii.

47.—Bacci, G. Osservazioni statistiche sulla determinazione dei sessi in *Patella coerulea* L. Pubbl. Staz. zool. Napoli 22 1949 pp. 26-39 tables.

48.—Bacci, G. & Oddo, F. Ricerche sierologiche sulla sistematica del genera *Venerupis* Lam. (Mollusca Bivalvia). Pubbl. Staz. zool. Napoli 21 1948 pp. 117-123 tables.

49.—Bacq, Z. M. L'action de la vératrine sur la musculature des invertébrés. Pubbl. Staz. zool. Napoli 18 1 1939 pp. 1-14 text-figs.

50.—Baerends, v. R. J. M. Sierlijke vormen uit de zee Blauwe Wimpel 4 1949 pp. 30-31.

51.—Baker, J. R. Further remarks on the Golgi element. Quart. J. micr. Sci. London 90 3 1949 pp. 293-307 text-fig.

Baernstein, N. D. vide von Brand, T. & others.

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53.—Balslov, G. & Petersen, S. K. Quelques notes sur la répartition des mollusques terrestres en Fionie (Danemark). Vidensk. Medd. Dansk naturh. Foren. 111 1949 pp. 225-234 1 fig.

54.—Barattini, L. P. & Ledón, O. A. Una nueva subespecie del genero *Strophocheilus* para la Malaco-fauna Uruguay Rev. Soc. Malac. 'Carlos de la Torre' Habanas 7 1 1949 pp. 1-2 text-fig.

55.—Bardán, E., Navarry, P. & Rodriguez, O. Nuevos datos sobre la sardina del Mar de l'Alborán (Agosto de 1948 a marzo des 1949). Bol. Inst. Esp. Oceanogr. 17 1949 pp. 1-4.

56.—Barnard, K. H. Note on the radula of *Fusilriton*. J. Conch. London 23 3 1949 p. 90 text-fig.

57.—Basse, E. Les Cephalopodes crétacés des Massifs côtiers syriens. Notes et Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 pp. 411-471 text map pls. i-ix.

58.—Basse, E. Quelques Ammonites nouvelles du Crétacé de Colombie (Am. Sud). Bull. Soc. géol. Fr. 5 18 8-9 1948 pp. 691-698 pl. xxv.

59.—Bayer, C. Catalogue of the Solariidae in the Rijksmuseum van Natuurlijke Historie III. *Torinia*. Zool. Verhandel No. 4 1948 pp. 1-44. [non vid.]

61.—Bayol, J. & Paulus, M. Grotte de la Balanzière [List]. Bull. Soc. Étud. Sci. nat. Nîmes 48 [1947] pp. 79-99.

62.—Becker, K. Untersuchungen über das Farbmuster und das Wachstum der Molluskenschale. Biol. Zbl. Leipzig 68 7-8 1949 pp. 263-288 figs.

63.—Beckmann, M. La faune des mollusques de la mer Noire près de Karadagh. [Russian with French résumé.] Trav. Sta. biol. Karadagh No. 6 1940 pp. 5-22.

64.—Bédé, P. Contribution à l'étude des Mollusques tertiaires. III. Sur une nouvelle espèce de Nautilite *Nautilus calvimonlensis* nob. der Lutétien des environs de Paris. Bull. Soc. géol. Fr. 5 18 4-5 1948 pp. 219-225 pl. ixa text-fig.

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68.—Bequaert, J. C. Three new South American land snails (*Strophocheilus*, *Thaumastus*, *Drymaeus*). Nautilus, Philad. 1949 62 4 pp. 113-115 pl. 7.

Benzer, P. vide Bevelander, G.

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70.—Berger, W. Die Bullaceen (Gastropoda) aus dem Tertiär des Wiener Beckens [List]. Anz. Akad. Wiss. Wien 1949 86 pp. 80-93.

71.—Bergmann, W. Comparative biochemical studies on the Lipids of marine invertebrates, with special reference to the Sterols [Mollusca pp. 162-164]. J. mar. Res. New Haven 1949 8 2 pp. 137-176 text-figs.

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Bogorase, D. vide Cazal, P.

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107.—Bondesen, P. & Kaiser, E. W. *Hydrobia* (*Potamopyrgus*) *jenkinsi* Smith

in Denmark illustrated by its ecology. Oikos, Copenhagen 1949 1 2 pp. 252–271, P. text-map, figs.

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109.—Bouxin, H. Considerations sur la bifurcation d'un Siphon chez un Lamellibranche (*Tapes decussatus* L.). Bull. Soc. zool. Fr. 73 1940 pp. 14–18 text-fig.

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118.—Bruce, J. R. Phylum Mollusca (Report supplement to "The Marine Fauna of the Isle of Man 1937"). Rep. Mar. biol. Sta. Port Erin 1945–47 pp. 52–54.

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130.—Bychovskaya (Piavlovskaya), I. E. (Parasitic fauna of *Perca fluviatilis* L. and the influence of some ecologic factors on its alteration.) Bull. Acad. Sci. Moscow. Biol. 3 1949 pp. 316-339.

131.—Calas, P. Note préliminaire a une révision des Rissoinidae du Redonien. Bull. Mus. Hist. nat. Paris (2) 21 1 1949 pp. 164-168.

Calderwood, H. H. *vide* Galtsoff, P. S. & others.

132.—Calembert, L. Précisions sur la géologie du Djebel Trozza (Tunisie centrale). [List.] [C.R.] Ass. franç. Av. Sci. (1939) 1941 63 pp. 461-464.

133.—Callan, H. G. The absence of a sex-hormone controlling regeneration of the *Hectocotylus* in *Octopus vulgaris* Lam. Pubbl. Ital. zool. Napoli. 181 1939 pp. 15-19 figs.

Cannicci, G. *vide* Brunelli, G.

Caporiacco, L. *vide* Bianchi, C.

134.—Carbonell, L., Arias, S. & Aveledo, R. Contribucion al conocimiento de los Moluscos de Tacarigua. Mem. soc. Cienc. nat. La Salle, Caracas 1949 9 24 pp. 223-256 figs.

135.—Carcelles, A. Notas sobre algunos gastropodos marinos del Uruguay y la Argentina, i-vi. Comun.-zool. Mus. Hist. Nat. Montevideo 2 40 1947.

136.—Carcelles, A. Notas sobre algunos Bivalvos Argentinos. Comun. zool. Mus. Hist. Nat. Montevideo 2 41 1947 pp. 1-10 pl. 1.

137.—Calié, W. & Linck, O. Die Stromberg-Mulde im nord-westlichen Württemberg. [Lists.] N. Jahrb. Min. Geol. Paläont. Stuttgart B 90 3 1949 pp. 427-478 text-figs & tables.

138.—Carson, R. L. Food from the sea. Fish and shellfish of New England. [Moll. pp. 59- .] Conserv. Bull. Bur. Biol. Surv. Washington No. 33, 1943 pp. 1-74. 34 text-figs.

Casalis, M. *vide* Dechaseaux, C.

139.—Casey, R. The Ammonite genus *Uhligella* in the English Albian. Geol. Mag. London 86 6 1949 pp. 333-345 pl. xix.

Castellanos, Z. J. A. *vide* Alonso, A. S.

140.—Cavalca, L. Le modificazioni del carbonato di calcio nelle conchiglie dei Lamellibranchi. Atti Soc. ital. Milano 1949 88 1-2 pp. 5-8.

141.—Cawston, F. G. South Africa's pond snails. African Wild Life, Johannesburg 1949 3 1 pp. 30-31.

142.—Cayolla da Mota, L. A. C.-R. Estudo da açcão do Gamahexano sobre alguns moluscos portugueses dos géneros *Planorbis*, *Limnaea* e *Physa*. An. Inot. Med. trop. Lisbon 5 14 [1949] pp. 289-319 tables.

143.—Cazal, P. & Bogoraze, D. Les glandes endocrines des Cephalopodes. Année Biol. Paris (3) 25 9-10, 1949 pp. 225-238, 9 text-figs.

Chapman, W. A. *vide* Galtsoff, P. L. & others.

144.—Charles, R. P. Le Lias de la Basse Provence occidentale. [Lists.] Bull. Mus. Hist. nat. Marseille 1948 8 2-3 pp. 101-127 tables & graphs.

145.—Charles, R. P. Note paléontologique sur le Trias de Provence. Bull. Soc. géol. Fr. 5 18 4-5, 1948 pp. 347-358.

146.—Charles, R. A. Note sur les fossils hauteriviens du massif d'Allauch. Mém. Soc. d'Études Paleont. Palethogr. Province 1 1, 1949 pp. 1-35 pl. 1 text-figs.

147.—Charles, R. P. Essai d'étude phylogénique des Gryphées liasiques. Bull. Soc. géol. Fr. 5 19 1-3, 1949 pp. 31-41, 1 fig.

Charles, R. P. *vide* Alloiteau, J.

148.—Chatterjee, S. C. *Ostrea gajensis* and other fossils from near Baripada, Mayurbhanj State. [Abstract.] Proc. Indian Sci. Congr. 1946, 32nd 3 pp. 55-56.

149.—Chaudoir, H. Nouvelle recoupe de l'horizon marin des Lanklaar du Westphalien B, en Campène orientale (Belgique). Bull. Mus. Hist. nat. Belg. 24 46 1948 pp. 1-6.

150.—Chavan, A. Remarques sur la signification climatique des mollusques marins fossils. Bull. Soc. géol. Fr. 5 19 7-9 1949 pp. 507-512.

151.—Chavan, A. Sur quelques espèces du calcaire de Vigny. C.R. Séances Soc. géol. Fr. Paris 6 1949 pp. 104-106 text-figs.

152.—Chestnut, A. F. Some studies of the digestive enzymes of the oyster (*Ostrea virginica*). J. Elisha Mitchell sci. Soc. Chapel Hill. 1949 65 2 pp. 215-216. [Abstract.]

153.—Chiesa, C. Contributo alla Conoscenza del Retico nella Lombardia occidentale. [List.] Riv. ital. Paleont. Milano 55 1 1949 pp. 18-33 text-figs. pl. iii.

154.—Chidambaram, K. & Unny, M. M. Certain observations on the development of the Sacred Chank,

Xancus pyrum (Linn.). [Abstract.] Proc. Indian Sci. Congr. 1948 34th 3 p. 178.

Chipman, W. A. *vide* Galtsoff, P. G. & others.

155.—Choubert, G. & Salvan, H. Essai sur la paléogéographie du Sénouien au Maroc. [Short lists in text.] Notes & Mem. Serv. Mines Carte Geol. Maroc 74 2 1949 pp. 13-50 text-figs. 1-6.

156.—Chronic, B. J., in Newell, N. D. Chronic, B. J. & Roberts, T. G. Upper Paleozoic of Peru 1949. pp. 1-241 pls. 1-42 (Moll. pp. 136-172 pls. 27-35) text-figs.

157.—Clench, W. J. Cyclophoridae and Pupinidae of Caroline, Fijian, and Samoan Islands. Bull. Bishop Mus. Honolulu No. 196 1949 pp. 1-52 text-figs.

158.—Clench, W. J. Charles Montague Cooke, Jr., 1874-1948. Bull. Bishop Mus. Honolulu No. 197 1949 pp. 32-33 portrait.

159.—Clench, W. J. The collection of the Marquis de Monterosata. [Note on destination.] Nautilus Philad. 1949 62 3 p. 102.

160.—Clench, W. J. New genera and species of Synceridae from Ponape Caroline Islands. Occ. Pprs. B.P. Bish. Mus. Honolulu 18 13 1946 pp. 199-206 text-figs.

161.—Clench, W. J. C. Montague Cooke, Jr., 1874-1948. Proc. Malac. Soc. London 1949 28 1 pp. 8-9.

162.—Clench, W. J. C. Montague Cooke, Jr. Revista Soc. Malac. 'C. de la Torre.' Habana 1949 6 3 pp. 88-89.

163.—Clench, W. J. & Agnayo, C. G. Dos nuevos Moluscos Cubanos del genero *Opisthosphon*. Revista Soc. malac. 'C. de la Torre' Habana 1949 6 3 pp. 89-90 text-figs.

164.—Clench, W. J. & Turner, R. D. The genus *Truncatella* in the Western Atlantic. Johnsonia Cambridge U.S.A. 2 25 1948 pp. 149-164 text-figs. plates 65-73.

165.—Clench, W. J. & Turner, R. D. The Western Atlantic marine mollusca described by C. B. Adams. Occ. Pprs. on Mollusks, Camb. Mass. 1 15 1950 pp. 233-403 pls. 29-49.

- 166.—Coe, W. R. Nutrition and sexuality in Protandric Gastropods of the genus *Crepidula*. Biol. Bull. Woods Hole 94 1948 pp. 158-160.
- 167.—Coe, W. R. Divergent methods of development in morphologically similar species of Prosobranch Gastropods. J. Morph. Philadelphia 84 1949 pp. 383-399 text-figs.
- 168.—Coe, W. R. Variations in the expression of sexuality in the normally protandric gastropod *Crepidula plana* Say. J. exp. Zool. Philadelphia 108 1948 pp. 155-169 graphs figs.
- 169.—Coen, G. S. Nota su alcune forme nuove di "*Cypraea*." Historia Nov. Roma 3 1 1949 pp. 13-18.
- 170.—Coen, G. S. Di una nuova Famiglia di Gastropodi fossili. Natura. Milano 40 3-4 1949 pp. 46-48 text-figs.
- 171.—Cole, H. A. Decline of oyster populations. Challenger Soc. London 3 1 1949 pp. 18, 19.
- 172.—Collignon, M. Une Ammonite nouvelle du Cénomanien d'Espagne: *Protacanthoceras jacobii*. Ann. Hébert et Haug Paris 7 1949 pp. 80-83 fig. 1.
- 173.—Collignon, M. L'Oxfordien dans le Sud-Ouest de Madagascar. Ann. Hébert et Haug Paris 7 1949 pp. 85-97.
- 174.—Colom, G. La geologia del cabo Pinar, Aleudia (Mallorca). R. Soc. esp. Hist. Nat. Tomo Extraord. 1949 1946 pp. 361-389, short lists pp. 367, 385, 386.
- 175.—Comfort, A. Large *Cepaea nemoralis* in the Locard collection. J. Conch. London 23 3 1949 p. 71.
- 176.—Comfort, A. Identity of the shell pigment of *Halotis cracherodii* Leach. Nature, London 163 4147 1949 p. 647.
- 177.—Comfort, A. & Nicholas, R. E. H. Acid-soluble pigments of molluscan shells. 2. Pigments other than porphyrins. 3. The indigoid character of the blue pigment of *Halotis cracherodii* Leach. 4. Identification of shell porphyrins with particular reference to conchoporphyrin. Biochem. J. Cambridge 1949 45 2 pp. 199-210 figs.
- Connanghey, B. H. *vide* Pickford, G. E.
- 178.—Contaut, H. Sur l'âge des calcaires blancs inférieurs de la Vallée de la Meuse. [Short list of fossils.] Bull. mens. Soc. Sci. Nancy N.S. 4 2 1939 pp. 38-47.
- 179.—Cook, A. S. *Acme fusca* (Montagu) near Doncaster. J. Conch. London 23 3 1949 p. 84.
- 180.—Cooreman, T. La reproduction chez les Huitres. Nat. Belges, Bruxelles 30 2 1949 p. 28.
- Cooper, R. D. *vide* Macan, T. T.
- 181.—Corbeil, H.-E. Travail sur les mollusques *Mya arenaria* L., *Ostrea virginica* (Gmelin). Rapp. Stat. Biol. St.-Laurent, Québec 1949 8th pp. 45-54.
- 182.—Corbett, J. The settlement of the "Pile" fauna of the Mersey estuary. Challenger Soc. London 1948 2 20 pp. 13-14.
- 183.—Cotton, B. C. Australian recent and Tertiary mollusca family Volutidae. Rec. S. Aust. Mus. Adelaide 9 2 1949 pp. 118-196 pls. xiii-xvi.
- 184.—Cotton, B. C. Australian recent and Tertiary mollusca family Marginellidae. Rec. S. Aust. Mus. Adelaide 9 2 1949 pp. 197-224 pls. xvii-xx.
- 185.—Cotton, B. C. Southern Australian Gastropoda, Part III. Trans. roy. Soc. S. Aust. 1948 72 1 pp. 30-32 pl. i.
- Cotton, B. C. *vide* Teichert, C.
- 186.—Cowper, S. G. The effect of certain inorganic and vegetable substances on the English pond snail *Planorbis corneus* (Linné, 1758). Ann. Trop. Med. Parasit. L'pool. 42 2 1948 pp. 119-130 tables.
- 187.—Cox, L. R. F. A. Singleton, 1897-1947. Proc. Malac. Soc. London 1949 28 1 pp. 2, 3.
- 188.—Cox, L. R. Neogene mollusca from the Dent Peninsula, British North Borneo. Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 pp. 1-70 text-figs. pls. 1-6.
- 189.—Crampton, H. E. Population studies on Partulae of the Pacific Islands. Proc. 8th Congr. Internat. Congr. Genetics issued as Suppl. Vol. to Hereditas, Lund 1949 pp. 551-552.

190.—Crawford, G. I. The Armstrong College zoological expedition to Siwa Oasis (Libyan Desert) 1935. *Mollusca*. *Proc. Egyptian Acad. Sci.* 1949 **4** pp. 45–57.

191.—Crockford, M. B. B. Geology of Ribbon Creek area, Alberta. *Moll. lists* pp. 22, 27. *Rep. Res. Council Alberta*, Edmonton No. 52 1747 pp. 64 [Index 4 pp.] map text-figs.

192.—Cozzi, S. Prime ricerche sulla Seppia del Mar Ligure. *Boll. Mus. Zool. Anat. comp. Genova* **18** 1938 pp. 125–127.

Crecheret, R. F. *vide* Martin, O. R.

Cronic, B. T. *vide* Newell, N. D. & others.

Crouzel, F. *vide* Bergounioux, T. M.

193.—Dahmer, G. *Sollea* n. nom. [for *Tylophora* Dahmer 1936 non Pavesi 1880]. *Archiv f. Molluskenk.* **78** 1/3 1949 p. 100.

194.—Dahmer, G. Die Fauna de Koblenzquarzits Unterdevon, Oberkoblenz-Stufe) vom Kùhkopf bei Koblenz. *Senckenbergiana*, Frankfurt **29** 1–6 1949 pp. 115–136 pls. 1–3.

195.—Dammerman, K. W. Het faunistisch onderzoek van de Noordoostpolder. *Meded. Comm. Faun. Onderz. Zuiderzeepolders* **1** 1949 pp. 1–48.

196.—Darteville, E. Contribution à la faune malacologique des terrasses de la région des lacs Edouard et Kivu. *Bull. Ser. Geol. Leopoldville Congo Belges* **3** 1948 pp. 99–145 tables, pl. i.

197.—Darteville, E. Nouvelles données sur les perles fossiles. *Bull. Soc. belge Géol. Pal. Hydr.* **57** 3 1949 pp. 674–679.

198.—Darteville, E. Notes conchyliologiques Africaines VIII—Description d'un Enidae nouveau: *Edouardia mayumbensis* n. sp. *Rev. Zool. Bot. afr.* **41** 2/3 1948 pp. 126–127 text-figs.

Das, R. *vide* Reddi, K. K. & others.

199.—Dathe, H. Merkwürdige Larchplätze für Tintenfische. *Natur u. Volk* **78** 10–12 1948 pp. 171–174 text-figs.

Davis, A. G. *vide* Thomas, H. D.

200.—Davis, H. C. On cultivation of larvae of *Ostrea lurida*. *Anat. Rec. Philad.* 1949 **105** 3 Abstract 237 p. 591.

201.—Dawson, W. R. Some eighteenth-century Conchologists. *J. Conch.* London 1949 **23** 2 pp. 44–47.

202.—Dechaseaux, C. Essai sur la paléobiologie des Rudistes. Le genre *Bournonia*. *An. Paléont. Paris* **35** 1949 pp. 119–130, 4 pls. text-figs. 1–3.

203.—Dechaseaux, C. & Casalis, M. Sur l'existence chez *Hippurites radiosus* des Moulins d'une cavité homologue des canaux palléaux des Caprinidés. *Bull. Soc. géol. Fr.* **5** 19 4–6 1949 pp. 279–282 pl. x.

204.—Deevey, Jr., E. S. Pleistocene research. A review by the members of the Committee on Interrelations of Pleistocene Research, National Research Council. 3. Biogeography of the Pleistocene Part I: Europe & North America. *Bull. Geol. Soc. Amer.* Washington D.C. **60** 9 1949 pp. 1315–1416 tables text-figs.

205.—Delpey, G. Les gastéropodes mésozoïques de la Région Libanaise. [List of spp. & vars. pp. 250–270.] *Notes et Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban* **3** 1940 pp. 5–292, 5 maps pls. i–xi.

206.—Demanet, F. Contribution à l'étude de la microfaune marine du Westphalien de la Campine. [Belgium.] *Bull. Inst. R. Sci. nat. Belg.* 1949 **25** 37 pp. 1–10 pls. i, ii.

207.—Denizot, G. La Costière Nimoise. [List.] *Bull. Soc. Étud. Sci. nat. Nîmes* **48** [1947] pp. 137–151, 1 fig.

208.—Deschaseaux, C. Bandes siphonales, piliers et siphons des Rudistes. *Bull. Soc. géol. Fr.* (5) **17**, 7–9, 1948 pp. 425–435.

209.—Desjardin, M. Les *Rissoria* de l'île de Cuba. *Jour. des Conchybiol.* Paris **89** 1949 pp. 193–208 pls. ix–x.

210.—Dey, A. K. Fossil Cypraeidae from the Quilon bed, Travancore State, S. India. *Proc. Indian Sci. Congr.* 1947 33rd 3 p. 104. [Abstract of paper describing four new species, *Zoila selulden*, *Cribraria quilonensis*, *Zonarina travancoria* & *Pseudoxonaria gimonnei*.]

de Wit, S. D. *vide* Raven, C. T.

211.—Dickinson, J. C., Jr. An ecological reconnaissance of the biota of some ponds and ditches in northern Florida. [Moll. p. 25.] Quart. J. Florida Acad. **11** 2-3 1949 pp. 1-28 4 figs. 1 map.

212.—Digby, B. Cephalopods from local waters at the University of Istanbul. Nature, London **163** 4141 1949 p. 411.

213.—Dolgopolskaia, M. A. Das Zooplankton des Schwarzen Meeres in der Nähe von Karadag. [Russian with German summary.] Trav. Sta. biol. Karadagh No. **6** 1940 pp. 57-111 18 figs. 1 table.

Donovan, J. E. *vide* Metz, C. B.

214.—Dons, C. Marine Boreorganismer VIII. Teredo-produksjonen og sjistem-peraturen. K. norske Vidensk. Selsk. Forh. Trondheim **21** 1949 pp. 186-190 tables.

215.—Dons, C. Norges Strandfauna XXXV. Fremgjellesnegler I. K. norske Vidensk. Selsk. Forh. Trondheim **21** 1949 pp. 191-196 text-figs.

216.—Donze, P. *Paraberriassella*, nouveau genre de Périsphinctidés. Bull. Soc. géol. Fr. **5** 18 4-5 1948 pp. 237-239 text-figs. pl. ix b.

217.—Dorn, C. Einige Feststellungen auf die "Pichtigstellungen zu C. Dorn's Beiträge zur Geologie des Rieses, von E. Weber. N. Jahrb. Min. Geol. Paläont. Stuttgart **B** 6 1944 pp. 166-168.

Downs, H. R. *vide* Miller, A. K. & others.

218.—Drake, R. S. Mollusca of the Eastern basin of the Chaco River, New Mexico. Nautilus Philad. 1949 **62** 3 pp. 94-97.

219.—Drake, R. J. A new species of *Oreohelix*, subgenus *Radiocentrum*, from south-eastern Chihuahua. Nautilus Philad. 1949 **62** 4 pp. 109-112 pl. 8.

220.—Drake, R. J. Mollusk shells found in alluvium, at Buell Park, Apache County, Arizona. Plateau, Flagstaff, Arizona **22** 2 1949 pp. 26-31 & inset of errata.

221.—Dubar, G. Études paléontologiques sur le Lias du Maroc. La fauna Domérienne du Djebel Bou-Dahar près de Béni-Tajjite étude suivie

de celle de quelques Mollusques d'autres gisements marocains. Notes et Mém. Serv. Mines Carte Geol. Maroc **68** 1948 pp. 1-250 pls. i-xxx.

222.—Dubourdieu, G. Presence de *Knemiceras compressum* Hyatt dans l'Aptien sup. de l'Ouenza (Algérie). C.R. Séances Soc. géol. Fr. Paris **2** 1949 pp. 26, 27 text-fig.

224.—Dubourdieu, G. & Sigal, J. Notes stratigraphiques et paléontologiques sur la région du Dj. Ouenza (Algérie) (Aptien, Albien, Cénomanién). Bull. Soc. géol. Fr. **5** 19 1-3 1949 pp. 205-221 pl. vi, table & figs. 1-2.

Duchateau, G. *vide* Florkin, M.

225.—Dudich, E. Zur Kenntnis der wirbellosen Tierwelt des Komitates Bars. [Mollusca pp. 105-106-107.] Fragmenta fauna Hungarica **10** 1947 pp. 94-108.

226.—Duran, M. & Massuti, M. Estudio de la distribución de la fauna litoral de Blanes y formas de adaptación del género *Patella*. Pub. Ins. Biol. apl. Barcelona 1949 **6** pp. 129-143 graphs & tables.

227.—Durham, J. W. Age of the Carbonera formation near Circuta, Colombia. [Moll. given in list.] J. Paleont. Menasha Wis. **23** 2 1949 pp. 146-147.

228.—Dusenbury Jr., A. N. The Hannatoma fauna in Colombia and Venezuela. [Moll. List given.] J. Paleont. Menasha, Wis. **23** 2 1949 pp. 147-149.

Dykastra, G. I. *vide* Braun, G. A.

229.—Dzvelaya, M. F. Relation of Tarkhan and Kotzakhur layers in Qruzia. [In Russian.] C.R. Acad. Sci. Moscow N.S. 1949 **66** 5 pp. 913-914.

230.—Eberzin, A. G. & Stevanović, P. M. Le plus ancien représentant du genre *Arccardium* et la stratigraphie de l'endroit où il a été découvert. [Fr. rés. pp. 155-157.] Bull. Mus. d'hist. Nat. Serbie **2** 1949 pp. 149-155 pl. 13.

231.—Edmonds, S. J. The commoner species of animals and their distribution on the intertidal platform at Pannington Bay, Kangaroo Island, South Australia. Trans. roy. Soc. S. Aust. 1948 **72** 1 pp. 167-177 pl. xvi.

232.—Ehrmann, P. *Cylindronenia* a new sub-genus of *Nenia*. *Nautilus Philad.* 1949 **62** 3 p. 104.

233.—Ellis, A. E. Nomenclature Notes. *J. Conch. London* 1949 **23** 2 pp. 50-51.

234.—[Ellis, A. E.] Notes on fauna and flora of the Royal Botanic Gardens, Kew, from the *Kew Bulletin* 1948 No. 1 113-124. *J. Conch. London* 1929 **23** 2 pp. 53-54.

235.—[Ellis, A. E.] as Editor *J. of Conch. Editorial Notes*. [On a letter re an innocuous snail becoming a pest when introduced into new environment.] *J. Conch. London* **23** 3 1949 p. 91.

Elms, M. A. *vide* Goldish, S. S.

Elsey, G. R. *vide* Black, E. C.

236.—Emura, S. On the systematic positions of the genera *Mandarina* and *Dolicheulota*. [In Japanese.] *Jap. J. Malac.* **13** 1-4 1943 pp. 34-38 5 text-figs.

Emura, S. *vide* Kuroda, T.

Engle, J. B. *vide* Galtsoff, P. S. & others.

Engle, J. B. *vide* Loosanoff, V. L.

Endo-Itabaski, T. *vide* McMullen, D. B. & others.

237.—Erspamer, V. Ricerche chimiche e farmacologiche sugli estratti di ghiandola ipobranchiale di *Murex* (*Truncularia*) *trunculus* (L.) *Murex* (*Bolimes*) *brandaris* (L.) e *Tritonalia erinacea* (L.). [English summary.] *Pubb. Staz. zool. Napoli* **20** 1947 pp. 91-101.

238.—Evans, R. G. The lethal temperatures of some common British littoral Molluscs. *J. Animal Ecol.* **17** 1948 pp. 165-173 graphs & tables.

239.—Fabre-Taxy, S. Faunes lagunaires et continentales du Crétacé supérieur de Provence. 1.—Le Turonien Saumatre. *Ann. Paléont. Paris* **34** 1948 pp. 61-95 pl. 1.

240.—Fairbridge, R. W. Geology of the Country around Waddamana, Central Tasmania. [Moll. List p. 116.] *Pap. roy. soc. Tasm.* **1948** 1949 pp. 111-149 8 text-figs. pls. v-ix.

241.—Fane, H. Fossil burrows from the Pre-Cambrian Ajibik Quartzite of Michigan [Molluscan burrows? not simple trails]. *Nature, London* **164** 4157 1949 p. 32 figs.

242.—Fauer-Fremont, E. & Thaureaux, J. Effet de quelques détergents sur l'œuf de *Teredo norvegica*. *Biochim. Biophys. Acta. N.Y.* 1949 **3** 3-4 pp. 536-548 figs.

243.—Feen, P. J. v.d. Byssus. *Basteria* **13** 4 1949 pp. 66-71 text-fig.

244.—Feen, W. S. S. v.d. (Jutting, W. S. S. v. B.) Revised list of the specimens of *Conus gloria-maris* Chemnitz in the collections of the world. *Bijdr. t. d. Dierk. Afl.* **28** 1949 pp. 153-163 pls. viii, ix.

245.—Feio, M. Note sur un gisement de fossiles viséens dans les environs de Méetola. *Comm. Serv. geol. Portugal* **27** 1946 pp. 99-116 text-figs, pl. 1.

246.—Feio, M. Contribution à la connaissance de *Posidonomya Beeheri* [List]. *Comm. Serv. geol. Portugal* **27** 1946 pp. 119-134 text-figs., pls. i-viii.

247.—Fergueur, L. Sur l'Eocène inférieur au N.-O. du Bassin de Paris et aux environs de Dieppe. *Bull. Mus. Hist. nat. Paris* (2) **21** 2 1949 pp. 321-332.

248.—Festa, A. Della fauna pliocenica di Sciarborasca e di Lerca (Liguria occ.). *Ann. Mus. Stor. nat. Genova* **63** 1949 pp. 173-174.

249.—Feugueur, L. Sur la présence des sables de Fontainebleau fossilifères a Neuville-Bosc (Oise) et des Marnes a huitres a Frémainville (Seine-et-Oise). *Feuille Nat. Paris N.S.* **4** 7-8 1949 pp. 73-74.

250.—Filatova, Z. A. & Zatzepin, B. V. I. Check list of the Fauna and Flora of the Northern Seas of the U.S.S.R. [In Russian.] 1948 pp. 358-402 figs.

Finlay, R. *vide* Fischer, A. G.

251.—Fischer, A. G. & Finlay, J. R. Microstructure of some Pennsylvanian Nautiloids. [Abstract.] *Bull. Geol. Soc. Amer. Washington, D.C.* **60** 12 2 1949 p. 1887.

Fischer, E. *vide* Germain, L.

252.—Fischer, H. Le Centenaire du Journal de Conchyliologie et le volume du Centenaire. *Jour. de Conchyliol. Paris* **89** 4 1949 pp. 191-192.

- 253.—Fischer, M. Sur un fragment de Bélemnite trouve dans le caup. Ann. Scient. Franche-Comté, Besançon 1948 3 pp. 120–122.
- 254.—Fischer, P. H. Role des coquillages dans les premières civilisations humaines (to continue). Jour. de Conchyliol. Paris 89 2 1949 pp. 82–93.
- 255.—Fischer, P. H. Role des coquillages dans les premières civilisations humaines (concluded). Jour. de Conchyliol. Paris 89 3 1949 pp. 149–157.
- 256.—Fischer, P. H. & E. [editors]. The Centenary of the "Journal de Conchyliologie" and the Centenary volume. Jour. de Conchyliol. Paris 89 4 1949 p. 192.
- 257.—Fischer, P. H. & Saddy, J. Examen en lumière de Wood de quelques Invertébrés marins des côtes de la Manche. Bull. Lab. Marit. Dinard Fasc. 32 1949 pp. 23–27.
- 258.—Fischer-Piette, E. Mollusques terrestres de Madagascar genre *Tropidophora* [*Tropidophora*]. Jour. de Conchyliol. Paris 89 1 1949 pp. 1–40 pls. i–iii.
- 259.—Fischer-Piette, E. Mollusques terrestres de Madagascar genre *Tropidophora* (continued). Jour. de Conchyliol. Paris 89 2 1949 pp. 41–61 pls. iii–iv.
- 260.—Fischer-Piette, E. Mollusques terrestres de Madagascar genre *Tropidophora* (continued). Jour. de Conchyliol. Paris 89 3 1949 pp. 111–146 text-figs. pls. vi, vii.
- 261.—Fischer-Piette, E. L'emploi des méthodes sérologiques comme contrôle de la Systematique. Jour. de Conchyliol. Paris 89 2 1949 pp. 107–109.
- 262.—Fischer-Piette, E. Mollusques terrestres et fluviatiles subfossiles récoltés par Th. Monod dans le Sahara occidental. Jour. de Conchyliol. Paris 89 4 1949 pp. 231–239 text-map.
- 263.—Fischer-Piette, E. & Millot, J. Iconographie et Classification de principaux *Tropidophora* de Madagascar (Mollusques Cyclostomides). Mém. Soc. Scient. Madagascar 3A 1 1949 pp. 57–64 pls. i–iii.
- 264.—Fishmongers Co., London. [Mollusca 2 pages.] The distinguishing features of fish. London 1949 [not paged] plates.
- 265.—Florkin, M. & Duchateau, G. Sur l'Osmorégulation de l'Anodonte (*Anodonta cygnea* L.). Physiol. comp. oecol. Den Haag 1 1948 pp. 29–43 text-figs. & tables.
- 266.—Flügel, H. Nachweis der Oberdevonstufe II im geazur Paläozoikum. Verh. geol. Bundes Amst. Wien 1947 10–12 1949 pp. 190–195 text-fig.
- 267.—Follet, A. Sur un affleurement du Senonien moyen à St.-Etienne-du-Rouvray (S.I.). [List.] Bull. Soc. Sci. nat. Rouen (10) 84 1948 pp. 6–7.
- 268.—Fowler, T. G. W. *Janthina exigua* Lamarck in Cornwall. J. Conch. London 1949 23 2 p. 49.
- 269.—Fowler, T. G. W. *Divaricella divaricata* (L.) in Scilly. J. Conch. London 23 3 1949 p. 68.
- 270.—Fradin, J. Recherches sur les Périssphinctidés par les méthodes graphiques et statistiques. Bull. Soc. géol. Fr. 5 19 4–6 1949 pp. 283–295 text-figs. 1–3.
- 271.—Franc, A. Notes histologiques sur la métamorphose de *Firoloida desmaresti* Lesueur (Mollusque Hétéropoda). Bull. Soc. zool. Fr. 74 1949 pp. 141–146.
- 272.—Franz, V. Das erdgeschichtliche Alter der thuringischen Funde von *Chilostoma ichthyomina* (Held). Archiv f. Molluskenk. Frankfurt-a-M. 1949 78 1/3 pp. 63–64.
- 273.—Franc, A. Unionidae d'Afrique occidentale Française recueillis par Th. Monod. Jour. de Conchyliol. Paris 89 3 1949 pp. 157–187 10 figs.
- 274.—Franc, A. Hétéropodes et autres Gastropodes planctoniques de Méditerranée occidentale. Jour. de Conchyliol. Paris 89 4 1949 pp. 209–230 text-figs.
- 275.—Franc, A. Pélécypodes de Perse occidentale et des régions voisines, d'après la collection J. de Morgan. Jour. de Conchyliol. Paris 89 4 1949 pp. 239–247.
- 276.—Francaviglia, A. Osservazioni geologiche sulle colline delle Terreforti (Regione Etna). [List pp. 65–74.] Giorn. Geol. Bologna 2 14 1939–40 pp. 55–81 map.
- 277.—Fretter, V. M. Small gastropods of rock pools. Challenger Soc., London 3 1 1949 p. 18.

278.—Fretter, V. & Graham, A. The structure and mode of life of the Pyramidellidae, parasitic Opisthobranchs. *J. Mar. biol. Ass. Plymouth* **28** 2 1949 pp. 493–532 11 text-figs.

279.—Fretter, V. & Graham, A. Feeding and Reproduction in the Pyramidellids. *Nature*, London **163** 4140 1949 pp. 361–362.

280.—Frömming, E. Beitrag zur Verbreitung der Weinbergsschnecke in der Mark. *Mark. Tierw.* Berlin **4** 1941 pp. 277–279.

281.—Frye, J. C. & Leonard, A. B. Pleistocene stratigraphic sequence in North-eastern Kansas. [*Moll.* p. 894.] *Amer. J. Sci.* New Haven **247** 12 1949 pp. 883–899 text-map, tables, pl. 1.

282.—Fuhrmann, A. Beiträge zur Geologie des Ibarz-Winterbarg-Massivs bei Bad Grund (Oberharz) im Lichte der neuen Aufschlüsse. [*List.*] *N. Jahrb. Min. Geol. Paläont.* Stuttgart **B91** 1 1949 pp. 35–80 map.

283.—Gabe, M. Sur le présence de cellules neuro-sécrétrices chez *Dentalium entale* Deshayes. *C.R. Acad. Sci. Paris* **229** 22 1949 pp. 1172–1173.

Gabe, M. *vide* Arvy, L.

284.—Gabe, M. & Prenant, M. Données histologiques sur le tissu conjonctif des Polyplacophores. *Arch. Anat. micr. Morph. expér.* Paris **38** 1 1949 pp. 65–78 text-figs.

285.—Gabe, M. & Prenant, M. Contribution à l'étude cytologique et histochimique de tube digestif des Polyplacophores. *Arch. Biol. Liège* **60** 1949 pp. 39–77 2 pls.

286.—Gabe, M. & Prenant, M. Contribution à l'étude histologique de Tégument de *Chiton olivaceus* Spengl. *Ann. Sci. nat.* Paris 1949 (11) **11** pp. 221–236 text-figs., pls. i–iii.

287.—Gabe, M. & Prenant, M. Contribution à la Cytologie de la glande salivaire de *Limnaea stagnalis* L. *Cellule*, Louvain **52** 1 1948 pp. 17–36 text-figs., pls. i–iv.

288.—Gabe, M. & Prenant, M. Contribution à l'Histologie de l'Oogenèse chez les Polyplacophores. *Cellule*, Louvain **53** 1949 pp. 97–116 pls. i, ii.

289.—Gabe, M. & Prenant, M. Particularités histochimiques de la gaine radulaire chez l'Escargot (*Helix aspersa* Müll.). *C.R. Acad. Sci. Paris* **229** 23 1949 pp. 1269–1270.

290.—Gabe, M. & Prenant, M. Données histochimiques sur les phosphatases alcalines chez *Acanthochites fascicularis* L. *Experientia*, Basel **5** 12 1949 pp. 476–477 text-figs.

291.—Gabielyan, A. A. The growth of the layers with *Varianussium fallax* Korobkov in Armenia. [*In Russian.*] *C.R. Acad. Sci. Moscow N.S.* 1946 **66** 4 pp. 677–679.

292.—Galiano, E. F. Observaciones morfológicas sobre los núcleos de las células musculares. *Bol. Soc. esp. Hist. nat.* 1949 **47** 1–2 pp. 49–65 pls. v, vi.

293.—Galiano, E. F. Sobre el tejido conjuntivo de los músculos aductores de *Tapes decussatus* L. *Bol. Soc. esp. Hist. nat.* 1949 **46** 9–10 pp. 699–720 pls. I–VI.

294.—Gallien, L. Caractère ambisexual de la callosité chez *Xenopus laevis* Daudin. *Bull. Soc. zool. Fr.* **72** 1948 pp. 192–193.

295.—Gallien, L. *Proboscidosarcus enigmaticus* nov. g. nov. sp. parasite de *Mactra solida* L. *Bull. Soc. zool. Fr.* 1949 **74** pp. 322–326 text-fig., pl. iv.

296.—Galtsoff, P. S., Chapman, W. A., Engle, V. B. & Calderwood, H. N. Ecological and Physiological studies of the effect of sulfate pulp mill wastes on Oysters in the York River, Virginia. *Fish Bull. Fish Wildlife Serv. Washington, D.C.* 1947 **43** pp. 59–185 graphs, tables & text-figs.

297.—Garcia, C. S. Notas y datos de estratigrafía española. *Bol. Soc. esp. Hist. nat.* 1949 **46** 9–10 pp. 749–757 pl. lxxvii.

298.—Gatenby, J. B. & Moussa, A. A. A note on the Cytoplasmic inclusions of the Spermatocyte of *Limnaea stagnalis*. *Cellule*, Louvain **52** 1949 pp. 297–308 text-fig. & plate.

299.—Germain, L. Contribution à la faune malacologique de l'Afrique Équatoriale. [*Index to Contributions 41–72 (1915–1936).*] Manuscript deposited by Prof. D. Fischer. *Bull. Mus. Hist. nat.* Paris 1949 (2) **21** 4 pp. 435–446.

300.—Gill, E. D. Devonian fossils from Sandy's Creek, Gippsland, Victoria. Mem. nat. Mus. Victoria 1949 No. 16 pp. 91-115 text-map, pls. ii, iii, f.i.

301.—Gillet, S. Les Invertébrés marins de l'Oligocène de Basse-Alsace. Bull. Soc. géol. Fr. 5 19 1-3 1949 pp. 51-74 18 text-figs., pls. iv-v.

Giri, K. V. *vide* Reddi, K. K. & others.

302.—Gisten, T. Zoologiska höstexkursioner till sydöstra Sverige 1947 och 1948. [Swedish with English summary.] [Moll. List p. 127.] Fauna och Flora. Uppsala Nos. 2-3 1949 pp. 105-128 text-figs.

303.—Glaessner, M. F. Mesozoic fossils from the Snake River, Central New Guinea. Mem. Qd. Mus. Brisbane 12 4 1949 pp. 165-180 text-map & figs., pls. xiv, xv.

Glenne, E. A. *vide* Hazelton, M.

304.—Glibert, M. Gastropodes du Miocène moyen du Bassin de la Loire. Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 pp. 1-240 graphs, pls. i-xii.

305.—Glibert, M. Gastropodes du Miocène moyen du Bassin de la Loire. Rectifications de nomenclature. Bull. Inst. R. Sci. nat. Belg. 1949 25 34 pp. 1-36.

306.—Goldich, S. S. & Elms, M. A. Stratigraphy and Petrology of the Buck Hill Quadrangle, Texas. [Short Lists pp. 1140, 1141, 1143.] Bull. Geol. Soc. Amer. Washington D.C. 60 7 1949 pp. 1133-1182.

Goncalves, L. I. *vide* Pereira, H. F.

Gordon, M. *vide* Smith, A. G.

307.—Goykher, G. B. [On the passage of small organisms through the pallial cavity and intestine of the bivalve mollusca.] C.R. Acad. Sci. Moscow N.S. 67 5 1949 pp. 905-907.

308.—Graham, A. The varieties of *Patina pellucida*. Challenger Soc. London 1948 2 20 p. 23.

309.—Graham, A. The Molluscan Stomach. Trans. roy. Soc. Edinb. 61 3 1949 pp. 737-778 24 text-figs.

Graham, A. *vide* Fretter, V.

310.—Grasveld, M. S. On the influence of various chlorides on maturation and cleavage of the egg of *Limnaea stagnalis* L. Proc. kon. Ned. Akad. Wetensch. Amsterdam 52 1949 pp. 284-295 2 figs., 6 tables.

311.—Gravelly, F. H. Shells and other animal remains found on the Madras beach. 1.—Groups other than snails, etc. (Mollusca Gastropoda). Bull. Madras Govt. Mus. N.S. Nat. Hist. Sect. 5 1 1941 pp. 1-112 30 figs.

312.—Gregory, H. Eocene fossil shells of Southern Nigeria. Nigerian Field 1949 14 2 pp. 70-73 text-figs.

313.—Grensted, L. W. A new locality for *Ena montana* (Draparnaud). J. Conch. London 23 3 1949 p. 72.

314.—Griffiths, M. O. A new Rudistid from the Niobrara of Colorado [Upper Cretaceous]. J. Paleont. Menasha Wis. 23 5 1949 pp. 471-472 pl. 79.

315.—Gross, K. Beiträge zur Geologie und Paläontologie des Warthegebiets. N. Jahrb. Min. Geol. Paläont. Stuttgart 89 3 1948 pp. 239-257 text-figs.

316.—Gross, K. Vorläufiges Verzeichnis der Devon-Fossilien des Siegerlandes. [List.] N. Jahrb. Min. Geol. Paläont. Stuttgart B1-4 1948 pp. 138-153.

317.—Gualini, D. Prime osservazioni su la biologia e la morfologia di *Gadus pontassou* Düben. Boll. Mus. zool. Anat. comp. Genova 18 1938 pp. 119-124.

318.—Gunter, G. The genera of living oysters. Anat. Rec. Philadelphia 101 1948 abstr. 81 p. 689 abstract.

319.—Gunter, G. Louisiana Oyster production. Science, Lancaster, Pa. 109 2838 1949 pp. 524-525.

320.—Haas, F. On freshwater mollusks from the Amazonian region. An. Inst. Biol. Mexico 1949 20 1-2 pp. 301-314.

321.—Haas, F. Land und Süßwassermollusken aus dem Amazonas-Gebiete. Archiv f. Mollusk. 78 4/6 1949 pp. 149-156 pl. 7.

322.—Haas, F. Acanthoceratid Ammonoidea from near Greybull, Wyoming. Bull. Amer. Mus. nat. Hist. 93 1 1949 pp. 1-39 text-figs., pls. 1-16.

323.—Haas, F. Three new land shells from Peru. *Fieldiana zool.* Chicago **31** 23 1948 pp. 189–193 figures 38–40.

324.—Haas, F. Land and fresh-water mollusks from Peru. *Fieldiana zool.* Chicago **31** 28 1949 pp. 235–250 text-figs.

325.—Haas, F. Some land and fresh-water mollusks from Guatemala. *Nautilus*, Philad. 1949 **62** 4 pp. 136–138.

326.—Habe, T. Erodonidae in Japan. *Illustrated Catalogue of Japanese Shells* 1 1949 pp. 1–6 pl. 1.

327.—Habe, T. Taxonomy of Japanese *Clausiliidae* (L.). [In Japanese and English.] *Venus*, Tokyo **10** 1940 pp. 79–86 12 figs.

328.—Habe, T. The radulae of *Truncatella* from Japan (Gastropoda). *Venus*, Mukaisima **12** 1–2 1942 pp. 21–24 7 text-figs.

329.—Habe, T. A new Amnicolid snail from the Kurile Islands. *Venus*, Mukaisima **12** 1–2 1942 pp. 25–27 2 figs.

330.—Habe, T. On the recent specimen of *Paludinella* (*Cavernacnella* new subgen.) *kuzuiensis*, with a list of known species of the Japanese cavernicolous molluscs. *Venus*, Mukaisima **12** 1–2 1942 pp. 28–32 2 figs.

331.—Habe, T. Classification of Japanese Assimineidae. *Venus*, Mukaisima **12** 1–2 1942 pp. 32–56 pls. 1–4.

332.—Habe, T. Observations on *Habea inazawai*, with special reference to its development. [In English and Japanese.] *Jap. J. Malac.* **13** 1943 pp. 65–67 6 text-figs.

333.—Habe, T. On the Radulae of Japanese Marine Gastropods (I). [In Japanese.] *Jap. J. Malac.* **13** 1/4 1943 pp. 68–76 pls. 3, 4.

Habe, T. *vide* Kuroda, T.

334.—Habe, T. Two new land snails from Nippon, *Diplommatina oyamai* n. sp. and *Hemiphaedusa attrita keizii* n. subsp. [In Japanese and English.] *Jap. J. Malac.* **13** 1/4 1943 pp. 77–80 4 text-figs.

335.—Habe, T. On three species of Clausiliid Snails from China and Formosa. [In Japanese with English summary.] *Jap. J. Malac.* **13** 1/4 1943 pp. 80–86 3 text-figs.

336.—Habe, T. Studies on the anatomy of Japanese land snails (I). [In Japanese and English.] *Jap. J. Malac.* **13** 1/4 1943 pp. 87–92 3 figs.

337.—Habe, T. Reviews of Japanese Helicarionidae (I). [In Japanese and English.] *Jap. J. Malac.* **13** 1943 pp. 92–96 6 text-figs.

338.—Habe, T. Supplemental notes with corrections on the Japanese Assimineidae. [In Japanese.] *Jap. J. Malac.* **13** 1/4 1943 pp. 96–106.

339.—Habe, T. Notes on *Cocculina rhyssa* Dall. [Japanese and English.] *Jap. J. Malac.* **15** 1949 pp. 67/68 1 fig.

340.—Habe, T. The genus *Oxyzyne*, new to Japanese Molluscan fauna. [In Japanese.] *Jap. J. Malac.* **15** 5–8 1949 pp. 79–80.

341.—Habe, T. Descriptions of two new species of marine Gastropods from Japan. *Jap. J. Malac.* **15** 1949 pp. 81–83 2 figs.

Habe, T. *vide* Kira, T.

Habe, T. *vide* Kuroda, T.

342.—Hägg, R. Några postglaciala skalföre-komster i Halland *Maetra solida* f. *typica* från Varberg, *Ostrea edulis* från södra Halland. *Geol. Fören. Stockh. Förh.* **70** 2 1948 pp. 345–346.

Halacka, K. *vide* Wenig, K.

343.—Hall, Ä. On the presence of *Ancylus fluviatilis* in Ringsjön Scania. *K. fysioogr. Sällsk. Lund Förh.* 1949 **19** pp. 20–30 text-map & fig.

344.—Hall, C. & Pittman, L. Taxonomic status of *Bulinulus* (Mollusca, Gastropoda) in Texas. *Field & Lab.*, Dallas 1949 **17** 2 pp. 35–40 19 figs.

Hand, C. *vide* Ingram, W. M.

345.—Hanson, F. N. Geology of the North-Western Coalfield, N.S.W. Part IV. Geology of the Gunnedah-Carlew District; Part V. Geology of the Breeza District; Part VI. Geology of South Western part of County Nandewar. *J. Roy. Soc. N.S.W.* 1949 **82** 3 pp. 241–261 pl. xvi. [Short Lists.]

Hanna, G. D. *vide* Hertlein, L. G.

346.—Hanna, G. D. & Hertlein, L. G. Two new species of Gastropods from the Middle Eocene of California. *J. Paleont. Menasha, Wis.* **23** 4 1949 pp. 392–394 text-figs., pl. 13.

- 347.—Hanna, G. D. & Strong, A. M. West American Mollusks of the genus *Conus*. Proc. Calif. Acad. Sci. (4) 26 919 49 pp. 247–322 pls. 5–10, 4 text-figs.
- 348.—Harder, P., Jensen, S. & Laursen, D. The marine Quaternary sediments in Disko Bugt. [Numerous Molluscan Lists.] Midd. Gronland 1949 149 1 pp. 1–85 text-figs., table & pls. i–viii.
- 349.—Harper, F. J. Concerning *Terebra micans*. Nigerian Field 1949 14 4 pp. 167–168 text-fig.
- 350.—Haskin, H. H. On the spawning behaviour of Oysters and of *Venus mercenaria* with especial reference to the effects of Spermatie Hormones. Anat. Rec. Philad. 1949 105 3 abstract & pp. 484–485.
- 351.—Hasslein, L. *Campylaea faustina* in Westlitaen. Arch. Molluskenk. Frankfurt-a/M. 1949 78 1/3 p. 99.
- 352.—Hayasaka, I. A Permian Cephalopod faunule from Chêchiang Province, China. Acta Geol. Taiwanica 1 1 1947 pp. 13–38 pls. i, ii.
- 353.—Hazelton, M. & Glennie, E. A. Cave Fauna. Pub. Cave Res. Group [1947] No. 1 pt. 2 pp. 1–20. [Moll. p. 2.]
- 354.—Hedberg, H. D. The Hannotoma fauna in Colombia and Venezuela. J. Paleont. Menasha, Wis. 23 2 1949 pp. 149–151.
- 355.—Heilman, R. A. A further study of the Mollusks of Lebanon County, Pennsylvania. Proc. Penn. Acad. Sci. 23 1949 pp. 125–127.
- 356.—Heinzelin da Braucourt, J. Industrie lithique des graviers aurifères de la Lodjo (Ituri, Congo Belge), description de la Collection V. Piret. [Moll. p. 4.] Bull. Mus. Hist. nat. Belg. 24 8 1948 pp. 1–16 text-figs., pls. i–iv.
- 357.—Hennekam, Schnif & Van der Slik. De rijke tocht. Met de schelpenzuiger Legma op de Westerschelde. Lev. Natuur 52 1949 pp. 51–59 13 figs.
- Herrera, F. V. vide Maldonado, J. F.
- Hertlein, L. G. vide Hanna, G. D.
- 358.—Hertlein, L. G. & Hanna, G. D. Two new species of *Mytilopsis* from Panama area. Bull. S. Calif. Acad. Sci. 48 1 1949 pp. 13–18 text-figs.
- 359.—Hertlein, L. G. & Strong, A. M. Note on the nomenclature of two marine gastropods from the Galapagos Islands. Nautilus Philad. 1949 62 3 pp. 102–103.
- 360.—Hertlein, L. G. & Strong, A. M. Eastern Pacific expeditions of the New York Zoological Society XXXIX, Mollusks from the West Coast of Mexico and Central America, Part VI. Zoologica, New York 33 4 1948 pp. 163–198 pls. i, ii.
- 361.—Hertlein, L. G. & Strong, A. M. Eastern Pacific expeditions of the New York Zoological Society XL, Mollusks from the West Coast of Mexico and Central America, Part VII. Zoologica, New York 34 2, 9 1949 pp. 63–97 pl. 1.
- 362.—Hertlein, L. G. & Strong, A. M. Eastern Pacific expeditions of the New York Zoological Society XLI, Mollusks from the West Coast of Mexico and Central America, Part VIII. Zoologica, New York 1949 34 4, 19 pp. 239–258 pl. 1.
- 363.—Hes, J. W. Agaatslakken en Suikerriet. [Summary in English.] Chronica Nat. 105 9 1949 pp. 226–227.
- 364.—Hessland, I. Investigations of the Lower Ordovician of the Sihjan District, Sweden. III. A Lower Ordovician *Pseudoconularia* from the Sihjan District. Bull. Geol. Inst. Univ. Upsala 33 1949 pp. 429–436 pls. i–iv.
- 365.—[Hirase, S.] *Euhadra quaesita* (Jay.). Venus Tokyo 10 1 1940 Cover, figs. & p. 40.
- 366.—Hirtz, P. L'Anticlinale du Gros Foug au N. de Serrières-en-Chautagne (Savoie). [List of spp. in text.] Bull. Soc. géol. Fr. 5 19 1–3 1949 pp. 161–166 text-maps.
- 367.—Hodgkin, A. L. & Katz, B. The effect of Calcium on the Axoplasm of giant nerve fibres. J. exp. Biol. Cambridge 26 3 1949 pp. 292–294 text-figs., pl. 8.
- 368.—Hoopen, E. C. N. v. Notes on some structures of South African Ammonites. S. Afr. J. Sci. Johannesburg 45 1949 pp. 56–66.
- 369.—Hoffmann, K. Eine neue Ammonitenfauna aus dem unteren Lias (Lias B2) Nordwestdeutschland. Jahrb. Reichs. Bodenforsch. Berlin 62 1944 pp. 288–337 pls. 16–19 24 text-figs.

370.—Hölzl, O. Molluskenfaunen der subalpinen Molasse Oberbayerns. [List.] N. Jahrb. Min. Geol. Paläont. Stuttgart **B9-12** 1948 pp. 385-400.

371.—Holme, N. A. The fauna of sand and mud banks near the mouth of the Exe estuary. [Moll. pp. 225-228. 235-237.] J. Mar. Biol. Ass. Plymouth **28** 1 1949 pp. 189-237 tables, graphs, pls. i, ii.

372.—Hossfeld, P. S. The stratigraphy of the Aitape skull and its significance. [Short List of Moll. p. 205.] Trans. roy. Soc. S. Aust. 1949 **72** 2 pp. 202-207.

373.—Hopkins, A. E. Determination of condition of Oysters. Science, Lancaster, Pa. **110** 2865 1949 pp. 567-568.

374.—Hornell, J. (posthumous publication). The study of Indian Molluscs, Part I. J. Bombay nat. Hist. Soc. **48** 2 1949 pp. 303-337 (to be continued), 28 text-figs.

375.—Hornell, J. (posthumous publication). The study of Indian Molluscs, Part II. J. Bombay nat. Hist. Soc. **48** 3 1949 pp. 543-569 (continued from p. 337), text-figs.

376.—Hornell, J. (posthumous publication). The study of Indian Molluscs, Part III. J. Bombay nat. Hist. Soc. **48** 4 1949 pp. 750-774 (continued from p. 569), 19 text-figs.

377.—Hörstadius, G., Kjellström & Hörstadius, S. Untersuchungen über die Eiweißverdauung in vivo und in vitro bei einigen Gastropoden. Pubbl. Staz. zool. Napoli **18** 2 1940 pp. 151-249 tables, pls. i-vi.

378.—Hoskins, J. W. The ecology of a stream. Christ Hospital Sci. J. & N.H.S. rep. 1950 1 pp. 3-9.

379.—Hourcq, V. Sur quelques Ammonites du Sénonien. Paléontologie de Madagascar XXVIII. Ann. Paléont. Paris **35** 1949 pp. 87-117 3 pls., text-figs. 1-24.

Hoia, vide Tchang, Si.

380.—Hubendick, B. Studies on *Bulinus*. Ark. zool. Stockholm **40** A16 1948 pp. 1-63 pls. 1, 2.

381.—Hubendick, B. Über den Bau und das Wachstum des konzentrischen Operculartypus bei Gastropoden. Ark. zool. Stockholm **40** A 10 1948 pp. 1-28 pl. 1 text-figs., tables.

382.—Hubendick, B. On a new *Siphonaria* from New Guinea. On *Siphonaria normalis* Gould and on the structure of the Epiphallus gland in Siphonariidae. Bull. Mus. Hist. nat. Belg. **23** 19 1947 pp. 1-8 text-figs.

Hubert, B. vide Meeure, A. D. J.

383.—Hubricht, L. Notes on the Polygyridae of Northern Arkansas. Nautilus Philad. 1949 **62** 3 pp. 98-99.

384.—Humphrey, W. E. Geology of the Sierra de los Muertos area, Mexico: with descriptions of Aptian Cephalopods from the La Peña formation. [Moll. pp. 118-156.] Bull. Geol. Soc. Amer. Washington, D.C. **60** 1 1949 pp. 89-176 maps, pls. 1-18.

385.—Humphrey, G. F. Adenosinetriphosphatases in the adductor muscle of *Saxostrea commercialis*. Physiol. comp. Oecol. Den Haag **1** 1949 pp. 366-375 tables & graphs.

386.—Hunter, W. R. The structure and behaviour of *Hiattella gallicana* (Lamarek), and *H. arctica* (L.) with special reference to the boring habits. Proc. Roy. Soc. Edinb. **63B** 3 (19) 1949 pp. 271-289 12 text-figs.

387.—Ikebe, H. On *Kateleysia* (*Nipponomarcia*) *nakamurai*, subgen. et sp. nov., from the Togarian Miocene of Japan. Venus, Tokyo **11** 2/3 1941 pp. 49-53 pl. 2.

388.—Ikebe, H. A catalogue of Japanese *Calliostoma*. [Text in Japanese.] Venus, Tokyo **11** 2/3 1941 pp. 54-63.

389.—Imlay, R. W. Paleocology of Jurassic Seas in the Western interior of the United States. Rep. Mar. Ecol. & Paleocool. Wash., D.C. 1949 No. 9 pp. 72-104 table & figs.

390.—Inaba, S. A preliminary note on the Glochidia of Japanese Freshwater Mussels. Annot. zool. jap. **20** 1941 pp. 14-23 text-figs.

Ingalls, J. W. vide McMullen, D. B.

391.—Ingle, R. M. A comparative study of Oyster condition. Science, Lancaster, Pa. **109** 2841 1949 pp. 593.

392.—Ingram, W. M. A check list of the Limacidae, Endodontidae, Arionidae, Succineidae, Pupillidae, Valloniidae, Carychiidae, and Truncatellidae of California. Bull. S. Calif. Acad. Sci. **48** 1 1949 pp. 19-34.

- 393.—Ingram, W. M. The larger freshwater Clams of California, Oregon and Washington. J. Ent. zool. Claremont Cal. **40** 1948 pp. 72-92 text-figs., pls. i, ii.
- 394.—Ingram, W. M. & Lotz, C. Land Mollusks of the San Francisco Bay counties. J. Ent. zool. Claremont, Cal. **41** 2 1949 pp. 3-22 text-map & figs.
- 395.—Ingram, W. M. Natural History observations on *Philomycus carolinianus* (Bosc.). Nautilus Philad. 1949 **62** 3 pp. 86-90.
- 396.—Ingram, W. M. Aestivation in *Helminthoglypta traskii phlyctaena* (Bartsch). Nautilus Philad. 1949 **62** 3 pp. 105-106.
- 397.—Ingram, W. M. & Hand, C. Feeding of *Agriolimax columbianus* (Gould) on the Californian bay fruit. Nautilus Philad. 1949 **62** 4 pp. 131-135 text-figs.
- 398.—Ingram, W. M. & Lotz, C. Land Mollusks of the San Francisco Bay Counties. J. Ent. zool. Claremont, Cal. **41** 1949 pp. 39-48 pl. 1.
- 399.—Ishida, J. [Carthan bicolor. Robuts. Zasshi Tokyo **57** No. 4 1947 pp. 43-46.
- 400.—Isimori, I. Land shells of Aguni-Sima. [In Japanese.] Venus. Tokyo **10** 3/4 1941 pp. 180-181.
- Ito, K. *vide* Hamai, I.
- Isizuka, K. *vide* Susuka, K.
- 401.—Ivanov, A. V. On the structure and development of the gastropod mollusc *Parenteroxenos dogieli* A. Iwanow (Family Entoconchidae). II. Organisation of the larva and post larval metamorphosis. Bull. Acad. Sci. Moscow Biol. 1949 **2** pp. 109-134 21 figs.
- 402.—Ivanov, A. V. On the structure and development of the gastropod mollusc *Parenteroxenos dogieli* A. Iwanow (Family Entoconchidae). III. On relations among the genera of Entoconchidae. Bull. Acad. Sci. Moscow Biol. 1949 **2** pp. 135-139 fig.
- 403.—Jackson, J. W. C. H. Moore. 1869-1949. J. of Conch. **23** 3 1949 pp. 85-86.
- 404.—Jackson, J. W. F. Taylor, 1871-1949. J. of Conch. **23** 3 1949 pp. 86-88.
- 405.—Jacob, P. K. & Nellayandar, M. Diatoms in the food of the Madras oyster, *Ostrea madrasensis*, Preston. [Abstract.] Proc. Indian Sci. Congr. 36th 3 1949 p. 157.
- 406.—Jacob, P. K. & Nellayandar, M. Reproduction, growth and development of the Madras oyster, *Ostrea madrasensis*, Preston. Proc. Indian Sci. Congr. 36th 3 1949 pp. 157-158.
- 407.—Jacobson, M. K. In Pinar Del Rio, a collecting trip. Nautilus Philad. 1949 **62** 3 pp. 78-86.
- 408.—Jacobson, M. K. A note on *Chondropometes magnum* Torre and Bartsch. Rev. Soc. Malac. Harbana **7** 1 1949 p. 6.
- Jacquemain, R. *vide* Jullien, A.
- 409.—Janetschek, H. Tierische successionen auf hochalpinem Neuland. Nach Untersuchungen am Hintereis-, Niederjock- und Gepatschferner in den Ötztaler Alpen. [Moll. 126-128.] Ber. naturw.- med. Ver. Innsbruck 1949 **48-49** pp. 1-215 table, 18 figs, 30 photos, pls. i-vii.
- 410.—Japan, H.M. The Emperor of. Opisthobranchia of Sagassia Bay [described by E. Baba, q.v.]. [In Japanese and English.] pp. 1-104, 1-7, pls. i-l.
- 411.—Jeaunet, A. Sur l'âge de l'holithe ferrugineuse dans le Jura neuchâtelois et les régions voisines. [Indicator spp. given in text.] Bull. Soc. géol. Fr. **5** 18 6-7 1948 pp. 423-434.
- 412.—Jeletzky, J. A. Some notes on "*Actinocamax*" *propinquus* Moberg 1885, its taxonomic position and phylogenetic relations within the family Belemnitellidae Pavlow 1913, morphological characters and synonymy. Geol. Fören. Stockh. Förh. **71** 3 1949 pp. 415-424 text-figs.
- 413.—Jeletzky, J. A. Nomenclatural Notes. *Scaphites morrowi* new name for *Scaphites pygmaeus* Morrow 1935, now Holgapfal 1888. J. Paleont. Menasha, Wis. **23** 3 1949 p. 330.
- 414.—Jeletzky, J. A. Über den taxonomischen Wert einiger morphologischer Elemente des Rostrums der belemnitenartigen Formen (Familie Belemnitellidae Pavlow 1913) sowie über die Gattung *Belemnella* (Nowak, 1913 subg.), Jeletzky 1914 ihre Phylo-

genie und einige Verbactere. N. Jahrb. Min. Geol. Paläont. Stuttgart **B9** 1949 pp. 257-287.

Jenson, S. *vide* Harder, P. & others.

415.—Jespersen, P. H. Da H. C. Andersen samlede snegle til Jomas Collin. Dyr i Natur. Mus. Kobenhavn **1945-46** pp. 87-105 text-figs.

416.—Jodot, P. & Lavocat, R. Observations sur l'âge des dépôts de la dimagne de Brioude et sur un gisement nouveau d'invertébrés dans le bassin de l'Alagnon (Cantal). Rev. Sci. nat. Auvergne **1948 N.S. 14** 2-4 pp. 86-90.

417.—Johansson, J. Über die Geschlechtsorgane der Hydrobiiden und Rissoiden und den ursprünglichen Hermaphroditismus der Prosobranchier. Ark. zool. Stockholm **40** A15 1948 pp. 1-13 text-figs.

418.—Johansson, J. Über die Geschlechtsorgane von *Aporrhais pespelecani* nebst einigen Betrachtungen über die phylogenetische Bedeutung der Cerithiacea und Architaenioglossa. Ark. zool. Stockholm **41** A8 1949 pp. 1-13 text-figs.

419.—Johnson, R. I. The lost types of *Obovaria depygis* (Conrad). Nautilus Philad. **1949 62** 3 p. 102.

420.—Jones, N. S. Some observations of the biology of *Patella*. Challenger Soc. London **1948 2** 20 pp. 12-13.

421.—Jones, J. R. E. The fauna of four streams in the Black Mountain district of South Wales. [Moll. p. 59.] J. Animal Ecol. **17** 1 1948 pp. 51-65 map, graph.

422.—Jones, N. S. Some recent additions to the Offshore fauna of Port Erin. [Moll. pp. 27-28.] Rep. Mar. biol. Sta. Port Erin **52** 1939 pp. 18-32.

423.—Jones, N. S. Biological note on *Capulus ungaricus*. Rep. Mar. biol. Sta. Port Erin **61** 1948 [1949] p. 29.

424.—Jørgensen, C. B. The rate of feeding by *Mytilus* in different kinds of suspension. J. Mar. biol. Ass. Plymouth **28** 2 1949 pp. 333-343, 3 text-figs., tables.

425.—Jørgensen, C. B. Feeding-rates of Sponges, Lamellibranchs and Ascidians. Nature, London **163** 4154 1949 p. 912.

426.—Jullien, A. Recherches sur quelques points de la physiologie cardiaque chez les Mollusques arguments qu'on peut en tirer sur l'application à ce groupe des la théorie des "Mediateurs chimiques." Am. Scient. Franche Comte, Besançon **1947 2** pp. 71-86.

427.—Jullien, A. Presentation de pièces relatives aux réactions inflammatoires chez les Céphalopodes. Bull. Soc. Hist. nat. Doubs. **1949 No. 52** pp. 25-27.

428.—Jullien, A. & Jacquemain, R. Nouvelles recherches sur les processus inflammatoires chez les Céphalopodes. Ann. Scient. Franche-Comté, Besançon **1947 2** pp. 87-98 text-figs.

429.—Jullien, A. & Ripplinger, J. L'extrait desséché de glande à pourpre de *Murex trunculus* et son action biologique. Bull. Soc. Hist. nat. Doubs **1949 No. 52** pp. 29-30.

430.—Jullien, A. & Ripplinger, J. Sur l'enrichissement des myocarde d'*Helix pomatia* en acetylcholine au cours du fonctionnement des cœur isolé et perguisé. C.R. Soc. Biol. Paris **143** 7-8 1949 pp. 505-508 table.

431.—Jullien, A. & Ripplinger, J. Liberation d'acetylcholine par l'excitation du nerf cardiaque chez *Helix pomatia*. C.R. Acad. Sci. Paris **229** 3 1949 pp. 243-245.

432.—Jullien, A., Ripplinger, J., Laurent, P. & Saget, G. Action de la dessiccation et du vieillissement sur les propriétés physiologiques de la glande hypobranchiale chez les *Murex*. Ann. Scient. Franche-Comté, Besançon **1949 4** Zool. pp. 25-42.

433.—Jutting, W. S. S. v. B. On a new species of *Gyltiotrachela* from Celebes (*Gyltiotrachela concreta* nov. sp.). Bacteria **13** 1949 pp. 64-65 text-fig.

434.—Jutting, W. S. S. v. B. On a collection of non-marine mollusca from Malaya in the Raffles Museum, Singapore, with an appendix on cave shells. Bull. Raffles Mus. Singapore **19** 1949 pp. 50-77 pls. 1-3.

435.—Jutting, W. S. S. v. B. The Malayan species of *Boysidia*, *Paraboysidia*, *Hypselostoma* and *Gyltiotrachela* (Gastropoda, Pulmonata, Vertiginidae), with a catalogue of all the species hitherto described. Bull. Raffles Mus. Singapore **1950 No. 21** pp. 5-47 text-figs.

436.—Jutting, W. S. S. v. B. Tropische Schelpen Panorama 36 29 1929 p. 8, 4 colour photos.

Jutting, W. S. S. v. B. *vide* Feen & B. Jutting, W. S. S. v. d. 244.

437.—Kaas, P. A giant whelk. J. of Conch. 23 3 1949 p. 72 pl. 3.

Kaiser, E. W. *vide* Bondeson, P.

438.—Kaltenbach, H. Ergebnisse zoologisch-geologischer Sammelreisen in N.O.-Afrika. 1. Die Salzseen (Sebecken) und ihre Mollusken-Faunen, unter besonderer Berücksichtigung der Cardien. Archiv für Molluskenk. Frankfurt a/M. 1949 78 1/3 pp. 1-26 maps, tables & text-figs.

439.—Kan, H. C. An experimental control of the intermediate host of *Schistosoma japonicum*. [English summary.] Chinese med. J. 67 2 1949 pp. 69-76 tables.

440.—Kanamaru, T. Faunistic account of *Euhadra* in Ise Province. [In Japanese with résumé in English.] Venus, Tokyo 10 2 1940 pp. 63-79, 8 figs. 3 tabs. 1 map.

441.—Kanamaru, T. A history of the Japanese Conchology (23). [In Japanese.] Venus, Tokyo 10 3/4 1941 pp. 134-140.

442.—Kanamaru, T. On the Japanese names of snails. [In Japanese.] Venus, Tokyo 10 3/4 1941 pp. 184-185.

443.—Kanamaru, T. A history of the Japanese conchology (24). [In Japanese.] Venus, Tokyo 11 2/3 1941 pp. 63-69, 13 figs.

444.—Kanamaru, T. A history of the Japanese conchology (25). Venus, Mukaisima 12 1-2, 1942 pp. 57-64, 3 figs.

445.—Kanamaru, T. A history of the Japanese Conchology (26). [In Japanese.] Jap. J. Malac. 13 1/4 1943 pp. 106-110 text-fig.

446.—Kanamaru, T. & Taki, I. Treatment of living shells for experiment. [In Japanese.] Venus, Tokyo 10 3/4 1941 p. 186.

Kanamaru, T. *vide* Tanyi.

Karandikar, K. R. *vide* Awati, P. R.

Karandikar, K. R. *vide* Subrahman-
yam, T. H. & others.

447.—Katura, O. Notes on Shell-collecting in the Bonin Islands. [In Japanese.] Venus, Tokyo 10 1 1940 pp. 51-58.

Katz, A. *vide* Hodgkin, M. L. & others.

Kauffmann M. *vide* Mislin, H.

448.—Kawahara, T. On *Devonia ohshimai* sp. nov., a commensal bivalve attached to the Synaptid *Leptosynapta ooplax*. Venus, Tokyo 11 4 1942 pp. 153-164, 1 pl. 2 figs.

449.—Kay, A. Some edible mollusks of Kauai, Hawaiian Islands. Nautilus, Philad. 1949 62 4 pp. 119-121.

450.—Keble, R. A. Notes on Australian Quaternary Climates and migration. [Moll. p. 39.] Mem. nat. Mus. Victoria, Melbourne No. 15 1947 pp. 28-81 figs. text-maps pl. 2.

451.—Kehrer, L. Note on the stratigraphic position of the Hannotoma zone in the western Tachira region, Venezuela. [Generic list given.] J. Paleont. Menasha, Wis. 23 2 1949 pp. 151-153.

452.—Kendall, S. B. *Lymnaea stagnalis* as an intermediate host of *Fasciola hepatica*. Nature, London 163 4153 1949 pp. 880-881.

453.—Kenk, R. The animal life of temporary and permanent ponds in Southern Michigan. [Moll. pp. 53-57.] Misc. Pub. Mus. Zool. Univ. Mich. 1949 71 pp. 1-65 pls. i-iii.

454.—Kira, T. Land shell fauna of Ponape Island. [List.] [In Japanese.] Jap. J. Malac. 13 1-4 1943 pp. 124-128.

455.—Kind, C. A. Marine invertebrate phosphatases. Biol. Bull. Woods Hole 97 2 1949 pp. 262-263.

456.—Kira, T. & Habe, T. Notes on Japanese species of the genus *Puncturella* (Fissurellidae). [In Japanese, key to spp. in English.] Jap. J. Malac. 15 5/8 1949 pp. 84-89, 2 figs.

Kira, T. *vide* Teramachi, A.

457.—Kisch, B. S. *Charonia lampas* (L.) in the lower littoral zone. J. Conch. London 1949 23 2 p. 37.

458.—Kisch, B. S. Further observations on *Charonia lampas* (L.). J. Conch. London 23 3 1949 p. 84.

Kjellström *vide* Hörstadius.

459.—Klinghardt, F. Vergleichende Untersuchungen über Tintenfische und kelmnitmäkenliche. Sitz Ber. Ges. naturf. Fr. Berl. 1942 1-10 1943 pp. 5-17 text-figs. pls. i-ii.

460.—Koch, H. J. A review of the South African representatives of the genus *Patella* Linnaeus. Ann. Natal Mus. P'mburg. 11 3 1949 pp. 487-517 text-figs. pls. xvii-xxiii.

461.—Knudsen, J. Geographical variation of *Littorina obtusata* (L.) in the North-Atlantic. Vidensk. Medd. Dansk naturh. Foren. 111 1949 pp. 247-255 3 figs.

462.—Knudsen, J. Amphineura. Zoology of Iceland 4 pt. 59 1949 1-11 tables.

463.—Knudsen, J. Scaphopoda. Zoology of Iceland 4 pt. 62 1949 3-7.

464.—Kobayashi, T. The Sakawa Orogenic cycle and its bearing on the origin of the Japanese Islands. J. Fac. Sci. Univ. Tokyo Sect. II. Mol. 5 7 1941 pp. 219-578 text-figs. pls. 1-18 & maps.

465.—Koch, H. J. La cause des empoisonnements paralytiques provoqués par les Moules. [C.R.] Ass. franç. Av. Sci. 1941 63 pp. 654-657.

466.—Koechlin, E. Demonstration einiger neuer oder wenig bekannter Fossilien aus dem Jura der Umgebung von Basel. Ecl. geol. helv. 41 2 1949 pp. 333-339 text-figs.

467.—Kolosváry, G. Neue Fundortsangaben über einiger Balanidenarte und Daten zur Assoziation der Balaniden und Mollusken. Veröff. dtsh. Kolon.-Nebersa-Mus. Bremen 1942 3 3 pp. 300-309.

Komiyama, S. vide McMullen, D. B.

468.—[Korde, K. B.] (Nautiloidea of the upper Cambrian of Angara.) C.R. Acad. Sci. Moscow N.S. 69 5 1949 pp. 671-673 2 figs.

469.—Korobkov, I. A. The finding of the genus *Psephaea* Crosse in the middle Eocene deposits of the Northern Caucasus. [In Russian.] C.R. Acad. Sci. Moscow N.S. 1949 66 4 pp. 693-695 figs.

470.—Korringa, P. More light upon the problem of the Oyster's nutrition. Bijdr. t. d. Dierk. Afl. 28 1949 pp. 237-248.

471.—Kostic-Podgorska, V. Calcaires à Bellerophon dans la Nikšićka Župa (Note brève). [In Serbian.] Bull. Mus. d'hist. Nat. Serbia 1 1948 pp. 111-114, pl. viii, figs. 1-4.

472.—Kostitzine, J. Contribution à l'étude de l'appareil reproducteur femelle de quelques mollusques prosobranchés marins. Arch. Zool. exp. gén. Paris 86 1949 pp. 145-167 pls. vi-viii.

473.—Kramp, P. L. Paeleorm og Paelekrebs. Dyr i Natur Mus. Kobenhavn 1944 45 pp. 25-55 text-figs.

474.—Krause, H. Untersuchungen Anatomie und Ökologie von *Lithoglyphus naticoides* (C. Pfeiffer). Arch. f. molluskenk. 78 4/6 1949 pp. 103-148 25 text-figs.

475.—Kubo, S. A collecting outfit of shells in sandy bottom. Venus Tokyo 10 2 1940 p. 120 fig.

476.—Kuhn, O. Über Rudisten aus Sizilien, Lykien und Syrien. N. Jahrb. Min. Geol. Paläont. Stuttgart B1 1944 pp. 23-29 text-figs.

477.—Kuhn, O. Stratigraphie und Paläogeographie der Rudisten. IV. Rudisten aus Griechenland. N. Jahrb. Min. Geol. Paläont. Stuttgart 89 1-2 1945 pp. 167-194 13 text-figs. pls. xxvii.

478.—Kuhn, O. Das Alter der Prominaschichten und der innerozänen Geberysbildung. Jahrb. geol. Bundes Anst. Wien 91 1-2 1948 pp. 48-94 pls. 1 2.

479.—Kuhn, O. Lehrbuch der Paläozoologie Stuttgart, 1949. [Mollusca pp. 106-163.] Pp. v, 1-326, 224 text-figs. (the 50 plates are included as text-figs.).

480.—Kuhn, O. Das Alter des fränkischen Rhäts nebst Bemerkungen über Rattsberg- und Arietenschichten. N. Jahrb. Min. Geol. Paläont. Stuttgart B 4-6 1949 pp. 174-180 text-fig.

481.—Kuhn, O. Die Gattung *Arnaudia* Bayle (Zur Systematik und Stammesgeschichte den Rudisten II). N. Jahrb. Min. Geol. Paläont. Stuttgart B 2/3 1944 pp. 61-67.

482.—Kuhn, O. & Andrusov, D. Stratigraphie und Paläogeographie der Rudisten III. Rudistenfauna und

Kreedeentwicklung in den Westkarpathen. N. Jahrb. Min. Geol. Paläont. Stuttgart **86** 3 1942 pp. 450-480 pls. xxviii-xxx.

483.—Kuiper, J. G. J. Note préliminaire sur un Gastéropode terrestre Enigmatique. *Basteria* **13** 1949 pp. 40-43 fig.

484.—Kuiper, J. G. J. *Pisidium pseudosphaerium* Favre in England. J. Conch. London 1949 **23** 2 pp. 27-32 text-figs. graphs.

485.—Kummel, B. Environmental significance of dwarfed Cephalopods. J. Sed. Petrology **18** 2 1948 pp. 61-64.

486.—Kurasige, H. Air temperature and vital force in exposure of *Venerupis philippinarum*. Venus, Tokyo **11** 4 1942 pp. 134-142, 2 figs.

487.—Kurasige, H. Lethal air temperatures of *Venerupis philippinarum* in exposure. [In Japanese, with English summary.] Venus, Tokyo **11** 4 1942 pp. 142-153, 3 graphs.

488.—Kurian, C. V. On a collection of Scaphoda (Mollusca) from the Travancore coast. [Abstract.] Proc. Indian Sci. Congr. 1949 35th 3 p. 197.

489.—Kuroda, T. Formosan species of the Turban shells of the group *Marmarostoma*. [In Japanese.] Venus, Tokyo **10** 1 1940 pp. 46-50 text-figs.

490.—Kuroda, J. Vitality of *Melargaphe* and *Tectarius* under artificial desiccation. [In Japanese.] Venus, Tokyo **10** 1 1940 pp. 50, 51.

491.—Kuroda, T. Notes on the shells from Taiwan. (3). [In Japanese.] Venus, Tokyo **10** 1940 pp. 97-107.

492.—Kuroda, T. Description of a new pond snail from Taiwan. [In Japanese & English.] Venus, Tokyo **10** 3/4 1941 pp. 129-130.

493.—Kuroda, T. Critical notes on land shells collected by A. Adams from Kino-O-Lima. [In Japanese.] Venus, Tokyo **10** 1941 pp. 157-166.

494.—Kuroda, T. Notes on *Trochus sacellus* and its Allies. [In Japanese.] Venus, Tokyo **10** 1941 pp. 166-169.

495.—Kuroda, T. A commensal *Caledoniella* occurs in the Japanese Seas. [In Japanese.] Venus, Tokyo **10** 1941 pp. 169-172.

496.—Kuroda, T. Northern limit of *Zaptyx* in its distribution. [In Japanese.] Venus, Tokyo **10** 3/4 1941 pp. 182-183.

497.—Kuroda, T. Snails from Mt. Kati. [In Japanese.] Venus, Tokyo **10** 3/4 1941 pp. 185-186.

498.—Kuroda, T. Notes on *Clausilia bernardi* and its allies. [In Japanese.] Venus, Tokyo **10** 3/4 1941 pp. 173-176.

499.—Kuroda, T. Land shells of Mt. Mitumine, Tibibu Range. [In Japanese.] Venus, Tokyo **10** 3/4 1941 pp. 176-180.

500.—Kuroda, T. Northern limit of *Zaptyx* in its distribution. [In Japanese.] Venus, Tokyo **10** 3/4 1941 p. 182.

501.—Kuroda, T. Dextral specimen of *Megalophaedusa dorcas* (Pils). [In Japanese.] Venus, Tokyo **10** 3/4 1941 p. 182.

502.—Kuroda, T. On the Japanese species of *Strombus* of the group *Euprotomus* with descriptions of two new species. Venus, Mukaisima **12** 1-2 1942 pp. 1-8, 4 figs.

503.—Kuroda, T. Two Japanese Murices whose names have been pre-occupied. Venus, Mukaisima **12** 1-2 1942 pp. 80-81.

504.—Kuroda, T. Classification of some closely-allied species of Japanese Cypracidae. [In Japanese.] Venus, Tokyo **12** 1/2 1942 pp. 81-93 text-fig.

505.—Kuroda, T. New Japanese shells. [Kuril Islands.] [In Japanese & English.] Jap. J. Malac. **13** 1/4 1943 pp. 1-7, 2 text-figs.

506.—Kuroda, T. New land shells from Tyugoku District. (1) A new species belonging to a new subgenus of the genus *Chamalycaeus*. [In Japanese & English.] Jap. J. Malac. **13** 1/4 1943 pp. 7-11 text-figs. 1-4.

507.—Kuroda, T. On a new gastropod genus *Habea*. [Japanese & English.] Jap. J. Malac. **13** 1/4 1943 pp. 11-14, 1 text-fig.

508.—Kuroda, T. *Akebiconcha*, a new Pelceypod genus. Jap. J. Malac. **13** 1/4 1943 pp. 14-18 text-figs. 1-3.

509.—Kuroda, T. Studies on Japanese species of *Cuspidaria*. [In Japanese.] Jap. J. Malac. **15** 1-4 1948 pp. 1-28, pls. 1, 2.

510.—Kuroda, T. Two new gigantic species of *Solemya*. [In Japanese.] Jap. J. Malac. 15 1-4 1948 pp. 29-32 text-figs. 1-5.

511.—Kuroda, T. On *Kiramodulus lacteus*, a new Gastropod genus and species. [In Japanese & English.] Jap. J. Malac. 15 3/8 1949 pp. 72-75. 1 fig.

512.—Kuroda, T. On *Argyropezu izekiana* Kuroda n. sp. [Japanese & English.] Jap. J. Malac. 15 5/8 1949 pp. 76-79, 1 fig.

513.—Kuroda, T. & Emura, S. On a new Pulmonate genus *Nesiohelix*. [In Japanese & English.] Jap. J. Malac. 13 1/4 1943 pp. 18-34, 14 text-figs.

514.—Kuroda, T. & Habe, T. On the systematic position of *Pyramidelidae*. [In Japanese.] Jap. J. Malac. 15 5/8 1949 pp. 55-58.

515.—Kuroda, T. & Habe, T. On the gastropod genus *Cocculina* from Japan. [In Japanese & English.] Jap. J. Malac. 15 5/8 1949 pp. 58-67, 1 pl.

516.—Kuroda, T. & Habe, T. On *Natica janthostoma* and an allied species which was confused with it. Jap. J. Malac. 15 1949 pp. 69-73. 1 fig.

517.—Kuroda, T. & Miyanaga, M. Land shell fauna of Kyobun-to [Port Hamilton], Korean Archipelago. Venus. Makaisima 12 3/8 1943 pp. 119-129. 3 figs.

518.—Kuroda, T. & Miyanaga, M. Notes on land shells from Tyosen (Korea). Venus. Makaisima 12 3-4 1943 pp. 130-138. 4 figs.

519.—Kutscher, F. Die Taunus-quarzitfauna von der Stromberger Neuhütte (Hunsrück). [Lists.] Jahrb. Reichs. Bodenforsch. Berlin 62 1944 pp. 272-287 pls. 13-14, 1 text-fig.

520.—Laidlaw, F. F. The Malayan species of *Diplommatina* (Cyclophoridae). Bull. Raffles Mus. Singapore 19 1949 pp. 199-215 text-figs.

521.—Lambert, L. Contrôle sanitaire coquillier. La contrôle de la salubrité des coquillages comestibles. Rev. Trav. Pêches marit. Paris 13 1944 pp. 565-579.

522.—Lambert, L. La Coque (*Cardium edule* L.). Rev. Trav. Pêches marit. Paris 13 1944 pp. 441-475 text-figs.

523.—Lamotte, M. Recherches sur l'homogamie dans les unions entrées formes de *Cepaea nemoralis*. C.R. Acad. Sci. Paris 229 1 1949 pp. 77-78 banding table.

524.—Lang, W. D. Report on Dorset Natural History for 1948 (except Birds and Lepidoptera). [Moll. p. 122.] Proc. Dorset nat. Hist. & Archaeol. Soc. 70 1949 pp. 121-123.

525.—Lange, W. Die Ammoniten-fauna der *Psiloceras*-Stufe Norddeutschlands. Palaeontographica Stuttgart A93 1-6 1941 pp. 1-192 tables and text-figs. pls. i-xx.

526.—Langmead, L. B. Land Mollusca from the Isle of Mull. J. Conch. London 1940 23 2 pp. 41-42.

527.—Lanri, G. Contributo alla conoscenza della fauna del Lago di Scanno (Abruzzo). [List.] Acta pont. Acad. Scient. 12 19 [1948] pp. 215-227.

528.—La Rocque, A. New uncoiled Gastropods from the Middle Devonian of Michigan and Manitoba. Contr. Mus. Pal. Univ. Michigan Ann. Arbor 7 7 1949 pp. 113-122 pls. i-iii.

Laurent, P. *vide* Jullien, A. & others.

Laursen, D. *vide* Harden, P. & others.

Lavocat, P. *vide* Jodot, P.

Leckioijck, W. van *vide* Ancion, C. & others.

529.—Lecointre, G. Niveaux paléontologiques de la Quaternaire marin de Casablanca (Maroc). C.R. Acad. Sci. Paris 229 23 1949 pp. 1247-1249.

Lederer, E. *vide* Tixier, R.

Leim, A. H. *vide* Medcof, T. G. & others.

Ledón, O. A. *vide* Barattini, L.P.

530.—Leloup, E. Caracteres anatomiques de *Ischnochiton winckworthi* Leloup 1936. Bull. Inst. R. Sci. nat. Belg. 1949 25 30 pp. 1-14 text-figs. & pl. i.

531.—Leloup, E. *Anamenia heathi* sp. nov. Solénogastre de l'Océan Atlantique. Bull. Mus. Hist. nat. Belg. 23 26 1947 pp. 1-11 text-figs.

532.—Leloup, E. Un nouveau Solénogastre à peau nue *Paragymnomenia richardi* G. nov. sp. nov. Bull. Mus. Hist. nat. Belge 23 35 1947 pp. 1-11 text-figs.

533.—Leloup, E. Un nouveau Solénogastre à peau nue de l'Océan glacial Arctique. *Micromenia simplex* G. nov. sp. nov. Bull. Mus. Hist. nat. Belg. 24 19 1948 pp. 1-7 text-figs.

534.—Leloup, E. Un nouveau solénogastre pronéoméniide *Entonnonenia atlantica* G. nov. sp. nov. Bull. Mus. Hist. nat. Belg. 24 37 1948 pp. 1-11 text-figs.

535.—Leloup, E. *Meromenia hiron-dellei* g. nov. sp. nov. solénogastre de Golf de Gascogne. Bull. Inst. r. Sc. nat. Belgique XXV 1 1949.

Leonard, A. B. *vide* Frye, V. C.

536.—Leyon, H. The anatomy of the cerebral nerves in Gasteropoda. Zool. Bidr. Uppsala 25 1947 pp. 394-401 text-figs.

537.—Likharev, I. M. New Chinese element in the fauna of Premorski land. [In Russian.] C.R. Acad. Sci. Moscow N.S. 1949 64 3 pp. 417-420 figs.

Linck, O. *vide* Carlé, W.

538.—Lindeborg, R. G. Some snail records from the Quetico Provincial Park of Ontario. Nautilus Philad. 1949 62 4 pp. 128-131.

539.—Lison, L. Forme et relations de croissance dans les coquille de *Patella*. Bull. Acad. R. Belg. Cl. sci. 1941 (5) 26 6-12 pp. 327-330 graphs.

540.—Lison, L. Sur la mécanique du développement des formes turbinées. Bull. Acad. R. Belg. Cl. Sci. 1941 (5) 27 1-4 pp. 241-259 graphs.

541.—Lison, L. Caractéristiques géométriques naturelles des coquilles de Lamellibranches. Bull. Acad. R. Belg. Cl. Sci. 1942 (5) 28 4-6 pp. 377-390.

542.—Lochman, C. Paleocology of the Cambrian in Montana and Wyoming. Rep. Mar. Ecol. & Paleocol. Wash., D.C. 1949 No. 9 pp. 31-71 pls. 1-8.

543.—Loosanoff, V. L. Gonad development and spawning of Oysters (*O. virginica*) in low salinities. Anat. Rec. Philad. 101 1948 Abst. 119 p. 705.

544.—Loosanoff, V. L. Survival, feeding and growth of Oysters (*O. virginica*) in low salinities. Anat. Rec. Philad. 101 1948 p. 705 Abst. 118.

545.—Loosanoff, V. L. Effect of changes in salinity on crystalline style of Oysters. Anat. Rec. Philad. 101 1948 p. 737.

546.—Loosanoff, V. L. & Engle, J. B. Effect of different concentrations of micro-organisms on the feeding of Oysters (*O. virginica*). Fish Bull. Fish Wildlife Serv. Washington D.C. 1947 42 pp. 37-57 graphs.

547.—Loosanoff, V. L. and Nomejko, C. A. Growth of Oysters, *O. virginica*, during different months. Biol. Bull. Woods Hole 97 1 1949 pp. 82-94.

548.—Loosanoff, V. L. & Smith, P. B. Some aspects of behaviour of oysters accustomed to different salinities. Anat. Rec. Philad. 1949 105 3 Abstract '309' p. 627.

549.—Loosjes, F. E. On the inner structure of the shells of *Hemiphaedusa cambojensis* Pfr. and *Phaedusa paviei* Morlet (Gastropoda, Pulmonata). Bull. Mus. Hist. nat. Belg. 24 39 1948 pp. 1-8 text-figs.

550.—Loosjes, F. E. & A. C. W. On *Phaedusa paviei* Morlet and an allied new species. Basteria Lisse 1949 13 1-3 pp. 31-35 pl. iv text-fig.

Lopez, M. *vide* Vidal.

552.—Lörcher, E. Die Stratigraphie von Braun-Jura (Dogger) und Ober- α im südwestlichen Württemberg. Jb. Ver. vaterl. Naturk. Württemb. 95 1939 pp. 145-230.

Lotz, C. *vide* Ingram, W. M.

553.—Lozek, V. Studie Českých stepi na Základě recentních i fosilních měkkýšů. Praha 1949 pp. 1-92 3 pls., 18 maps, tables.

554.—Lozek, V. Mäkkýše Muránskeho krasu. Mollusques du Karst de Muran. [French résumé.] Prirod. Sbornik, Bratislava 4 1947 pp. 119-158, 5 maps, tables.

555.—Lozek, V. *Chondrina tatrica* n. sp. in Tchecoslovaquie. Vest. ceskosl. zool. Spolnec Praha. 12 1948 pp. 83-88 text-figs.

556.—Lundman, B. Maps of the racial geography of some Partulae of the Society Islands based upon the material published by H. E. Crampton. Zool. Bidr. Uppsala 25 1947 pp. 517-533, 24 text maps.

- 557.—Macan, T. T. Survey of a moorland fishpond. *J. Animal Ecol.* 1949 **18** pp. 160–186 text-figs. tables & graphs. pls. 7, 8, 9.
- 558.—Macan, T. T. & Cooper, R. D. A Key to the British Fresh- and Brackish-water Gastropods with notes on their ecology. *Scient. Pub. Fresh-water biol. Ass. No. 13* 1949 pp. 1–45. 15 text-figs.
- 559.—Maccagno, A. M. Su di una "*Burtinella*" del Maëstrichtiano della Tripolitania. *Boll. Uff. geol. Ital.* **69** 1946 pp. 151–157, plates.
- McConnaughey, B. H. *vide* Pickford, G. E.
- 560.—MacGinitie, G. E. & MacGinitie, N. *Mollusca* pp. 327–401. *Natural History of Marine Animals*. New York 1949 pp. i–ix 1–47 text-fig.
- 561.—McGinty, T. L. A report on the Mollusca collected by the Pioneer Bahama expedition. *Mollusca*. Tavares **2** 3 1948 pp. 56–69.
- 562.—McGinty, T. L. *Epitonium* (*Cirsotrema*) *pilsbryi* [a correction]. *Nautilus Philad.* 1949 **62** 4 p. 142.
- 563.—McGinty, P. L. & T. L. The Pioneer Bahama Expedition. *Mollusca*. Tavares **2** 3 1948 pp. 40–55 map.
- 564.—McMullen, D. B., Endoita-bashi, T., Seto, S., Komcyama, S., Stone, R. Seasonal Studies on *Schistosoma japonicum* in the intermediate Host *Oncomelania novophora*. *J. Parasit. Lancaster, Pa.* **35** 6 (2) 1949 p. 28 (2).
- 565.—McMullen, D. B. and Ingalls, J. W. The control of *Schistosomiasis japonica*. IV. The effect of various chemicals on the Cercariae of *Schistosoma japonicum*. *Amer. J. Hyg. Baltimore* **45** 3 1947 pp. 294–298 tables.
- 566.—McMillan, N. F. A shell deposit in the Portstewart sand-dunes [Londonderry]. *J. Conch. London* 1949 **23** 2 p. 26.
- 567.—McMillan, N. F. The brackish-water Mollusca of Bromborough Pool, Cheshire. *J. Conch. London* **23** 3 1949 pp. 65–68.
- 568.—Madge, E. H. The Conchological Manuscripts of the late E. Dupont (Jr.), 1847–1933. *Mauritius Inst. Bull.* 1949 **3** 1 pp. 83–125.
- 569.—Makridin, V. P. The upper Devonian deposits of the Krasni-Oskal cupola in the north-western border of the Donetz ridge. [In Russian.] *C.R. Acad. Sci. Moscow N.S.* 1949 **66** 2 pp. 251–253.
- 570.—Maldonado, J. F. & Herrera, F. V. *Schistosoma mansoni* infection resulting from exposure to cercariae proceeding from single naturally infected snails. *Puerto Rico J. publ. Hlth. trop. Med.* 1949 **25** 2 pp. 230–255 tables.
- 571.—Mandahl-Barth, G. *Mucronalia angulata* n. sp. un nouveau gastéropode parasite. *Jour. de Conchyliol. Paris* 89 2 1949 pp. 148–149 pl. viii.
- Mann, E. R. *vide* Von Hearts, T. & others.
- 572.—Mansour-Bek, J. J. On the proteolytic and lipolytic enzymes in the stomach juice of some lamelli-branths. *Enzymologie* **12** 4 1948 pp. 221–231 [non vidi].
- 573.—Marchesini, E. Statistiche sulla variabilità di *Cyclostoma elegans* Müll. nel Quarternario ed attuale. *Boll. Soc. geol. ital.* **60** 2–3 1942 p. 306.
- 574.—Marchesini, E. Dati sulla variabilità e l'accrescimento relativo della conchiglia di *Natica* (*Neverita josephina* Risso del Golfo di Napoli. *Pubb. Staz. zool. Napoli.* **18** 2 1940 pp. 141–150 tables, figs. & graphs.
- 575.—Marks, J. G. Age of the Hannotoma fauna [Indicator spp. given.] *J. Paleont. Menasha, Wis.* **2** 1949 pp. 153–154.
- 576.—Marks, J. G. Nomenclatural units and tropical American Miocene species of the Gastropod family Cancellariidae. [Spp. new from Ecuador.] *J. Paleont. Menasha, Wis.* **23** 5 1949 pp. 453–454 text-figs. pl. 78.
- 577.—Mars, P. Note sur les sédiments quaternaires de l'étang de Berre et leur faune malacologique. *Bull. Mus. Hist. nat. Marseille* 1948 **8** 2–3 pp. 94–100 text-maps.
- 578.—Martens, E. v. Vorzeigung einiger Land Schnecken aus Sardinien und aus Ost-Borneo. *Sitz-Berichte Ges. Naturf. Freunde Berlin* 1804 pp. 195–203.
- Martin, J. *vide* Bewelander, G.

- 579.—**Martin, O. R. & Crehuet, R. F.** Apuntes para el estudio bionómico de la bahía de Santander. [Lists; Moll. pp. 29-39.] Bol. Inst. Esp. Oceanogr. No. 1 1948 pp. 1-41 map.
- 580.—**Martinson, G. G.** First discovery of the Neogene mollusca in the Irkutsk coal area. [In Russian.] C.R. Acad. Sci. Moscow N.S. 1949 67 2 pp. 365-367.
- 581.—**Marwick, J.** Lower Pliocene Mollusca from Otahuhu, Auckland. Palaeont. Bull. N.Z. 16 1948 pp. 4-38 Map pls. 1-8.
- 582.—**Mason, B.** The Geology of Mandamus-Pahau District, North Canterbury. [Short list.] Trans. Proc. Roy. Soc. N.Z. 77 3 1949 pp. 403-428 text-maps pls. 43-44.
- 583.—**Mason, B.** Middle Tertiary strata at Smith River, Lake Heron, New Zealand. [List of spp.] N.Z. J. Sci. Tech. 30B 1 1949 pp. 55-58.
- Massera, M. G. vide Bianchi, C. & others.**
- 584.—**Massuti, M.** Estudio del plancton del puerto de Mahón en el curso de un año (1946). Bol. Inst. Esp. Oceanogr. No. 2 1948 pp. 1-29.
- Massuti, M. vide Duran, M.**
- 585.—**Mattox, N. T.** Studies on the biology of the edible oyster *Ostrea rhizophorae* Guilding in Puerto Rico. Ecol. Monogr. Durham, N.C. 19 4 1949 pp. 339-356 text-figs. & graphs.
- 586.—**Mattox, N. T.** Effects of drying on certain marine snails from Puerto Rico. Ecology, Brooklyn 30 2 1949 pp. 242-244 2 graphs.
- 587.—**Mattox, N. T.** Notes on the distribution of some terrestrial gastropods in western Puerto Rico. Nautilus, Philad. 1949 62 4 pp. 126-128.
- 588.—**Matutani, K. & Mori, S.** Daily rhythmic activity of a land snail, *Fruticicola (Acusta) sieboldiana* (1). [In Japanese, résumé in English.] Jap. J. Malac. 15 5/8 1949 pp. 96-101, 2 figs.
- 589.—**Maubeuge, P. L.** Sur quelques ammonites du Lias de la Belgique, du Luxembourg et de la Lorraine septentrionale. Bull. Mus. Hist. nat. Belg. 24 18 1948 pp. 1-8 pls. i-ii.
- 590.—**Maubeuge, P. L.** Revision des Ammonites du genre *Phlyseogrammoceras*. Bull. Inst. R. Sci. nat. Belg. 1949 25 36 pp. 1-17 pls. i, ii.
- 591.—**Maubeuge, P. L.** Données paléontologiques nouvelles sur la Dolomie dite "dolomie de Beaumont" du Keuper moyen de Lorraine. Bull. Soc. géol. Fr. 5 19 1-3 1949 pp. 43-49 pl. iii & figs. 1-2.
- Maubeuge, P. L. vide Theobald, N.**
- 592.—**Maxia, C.** Osservazioni geologiche sui territori di Civitella S. Paolo e di Fiano Romano (Nord di Roma). [Short list in text.] Boll. Uff. geol. Ital. 69 1946 pp. 195-217 pls. i, ii.
- 593.—**Mayne, W.** The Cretaceous beds between Kuhn Island and Cape Franklin (Gauss Peninsula), Northern East Greenland. Midd. Grønland 1949 133 3 pp. 1-291, 70 text-figs. pls. 1-4.
- 594.—**Medcof, J. C., Leim, A. H., Needler, A. B. & Needler, A. W. H.** Paralytic shellfish poisoning on the Canadian Atlantic coast. Bull. Fish. Res. Board, Canada 75 1947 pp. 1-32 text-maps & tables.
- 595.—**Medcof, J. C.** A snail commensal with the soft-shell Clam. [Abstract.] J. Fish. Res. Board, Canada 7 5 1948 pp. 219-220.
- 596.—**Medem, F. Graf v.** Untersuchungen über die Ei und Spermawirkstoffe bei marinen Mollusken. Zool. Jahrb. Jena (Allg. Zool.) 1945 61 pp. 5-44, 5 text-figs. pls. 1, 2.
- 597.—**Meer Mohr, J. C. v. d.** *Achatina fulica* (Fér.) as a minor pest of tobacco. Chronica Naturae 105 1949 p. 290 figs. 1-2.
- 598.—**Meer Mohr, J. C. v. der.** On the reproductive capacity of the African or Giant snail, *Achatina fulica* (Fér.). Treubia Buitenzorg 20 1 1949 pp. 1-10 graph & tables.
- 599.—**Meeuse, A. D. J.** Mollusca in H. K. Airy Shaw Additions to the wild fauna and flora of the Royal Botanic Gardens, Kew, XX. Kew Bull. 1 1948 pp. 120-121.
- 600.—**Meeuse, A. D. J. & Hubert, B.** The mollusc fauna of Glasshouses in the Netherlands. Basteria 13 1949 pp. 1-30 figs. 1-2 pls. i-iii.

601.—Menkin, V. Cellular injury in some invertebrates. *Physiol. zool.* Chicago **22** 1949 pp. 124–131 tables.

Mehlman, B. *vide* Brand, T. V. & others.

602.—Mennessier, G. Comparaison entre les faunes des bassins à lignites cénomaniens du sud-est de la France. *Bull. Mus. Hist. nat. Paris* 1949 (2) **21** 6 pp. 765–769.

603.—Mennessier, G. Note préliminaire sur les niveaux à *Rudistes* coniaciens des massifs d'Uchaux et de la Cèze. *Bull. Mus. Hist. nat. Paris* (2) **21** 2 1949 pp. 311–315 fig. [List.]

604.—Mennessier, G. Description d'un Rudiste de l'Attique; *Mitrocaprina beotica* Munier-Chalmas sp. (*Plagioptychus beoticus* Munier Chalmas). *Bull. Mus. Hist. nat. Paris* 1949 (2) **21** 3 pp. 395–398 text-figs.

605.—Merle, R. Un conquérant du Monde l'Achatine. *La Nature* 169 1949 pp. 151–152 figs.

606.—Merle, R. Malacologie de guerre. *Nature, Paris No.* 3171 1949 pp. 214–216 text-figs.

607.—Metendez, B. Notas paleontológicas regionales. I. Granada. *Bol. Univ. Granada* **21** 86 1949 pp. 129–38 text-figs.

608.—Metz, C. B. & Donovan, J. E. Fertilizer from the eggs of the clam, *Macra solidissima*. *Biol. Bull. Woods Hole* **97** 2 1949 p. 257.

609.—Michel, R. Étude géologique du plateau de Gergovia. [Lists pp. 19, 50.] *Rev. Sci. nat. Auvergne* 1948 N.S. **14** 1 pp. 1–68 11 text-figs.

610.—Miletic, O. Données complémentaires sur la connaissance de la faune des secondes couches méditerranéennes sur le versant occidental du mont de Gučevo (Brusina). [List.] [Fr. rés. p. 183.] *Bull. Mus. d'hist. Nat. Serbie* **2** 1949 pp. 181–183.

Miletic, O. *vide* Pethovic, K. V.

611.—Miller, A. K. The last surge of the Nautiloid Cephalopods. *Evolution, Lancaster, Pa.* **3** 3 1949 pp. 231–238 text-figs.

612.—Miller, A. K. A giant Scaphopod from the Pennsylvanian of Texas. *J. Paleont. Menasha, Wis.* **23** 4 1949 pp. 387–391 pls. 76.

613.—Miller, A. K. & Youngquist, W. The Maquoketa coquina of Cephalopods. *J. Paleont. Menasha, Wis.* **23** 2 1949 pp. 199–204 pls. 40–42.

614.—Miller, A. K., Downs, H. R. & Youngquist, W. Some Mississippian Cephalopods from Central and Western United States. *J. Paleont. Menasha, Wis.* **23** 6 1949 pp. 600–612 text-figs., pls. 97–99.

615.—Miller, A. K. & Youngquist, W. American Permian Nautiloids. *Mem. Geol. Soc. Amer. Washington, D.C.* **41** 1949 pp. 1–218 text-figs., pls. 1–59.

Millot, J. *vide* Fischer-Piette, E.

616.—Milovanović, B. La structure et la fonction des Piliers des Hippuritidés. [Fr. rés. p. 256.] *Ann. géol. Pén. balkan (Beograd)* **15** 1938 pp. 227–267 text-figs.

617.—Milovanović, B. *Plagioptychus aquilloni* d'Orb. *Ann. géol. Pén. balkan (Beograd)* **15** 1938 pp. 440–441.

618.—Milovanović, B. [On *Medeella (Hippurites)*.] *Ann. géol. Pén. balkan (Beograd)* **16** 1939 pp. 77–88.

619.—Minato, M. Phasenanalyse der Gebirgebildungen der palaeozoischen Aera im Kitakami-Gebirge (nordöstliches Honshū, Japan). *Japan. J. Geol. Geogr.* 1944 **19** 1–4 pp. 151–180 pls. xvi.

620.—Mirigliani, G. Pliocene tra Licusati, Sleonio e Porto degl' Infreschi (Salerno). [Lists.] *Boll. Soc. Nat. Napoli* **57** 1949 pp. 60–71.

621.—Mislin, H. & Kauffmann, M. Der aktive Gefässpuls in der Arm-Schirmhaut der Cephalopoden. *Rev. suisse Zool. Genève* **55** 1948 pp. 267–271 text-figs.

622.—Miyadi, D. Ecological survey of the Benthos of the Ago-wan [Japan, Kii Peninsula]. *Annot. zool. jap.* **20** 3 1941 pp. 169–180.

623.—Miyayana, M. *vide* Kuroda, T.

624.—Modell, H. Das natürliche System der Najaden. 2. *Archiv f. Molluskenk. Frankfurt a/M.* 1949 **78** 1/3 pp. 29–48.

625.—Mohr, J. C. v. d. M. *Achatina fulica* (Fer.) as a minor pest of Tobacco. *Chronica Nat. Batavia* **105** 11 1949 p. 290 text-figs.

- 626.—Mokiyevski, O. B. Freshwater, littoral fauna of the Amur estuary. [In Russian.] C.R. Acad. Sci. Moscow N.S. 1949 66 6 pp. 1187-1190.
- Mold, J. D. *vide* Stranger, D. W. & others.
- 627.—Moll, F. Die Fossilen Terebranten und ihre beziehung zu den Rezenten Arten. Palaeontographica Stuttgart A94 3-6 1942 pp. 134-153 pls. xxv-xxvi.
- 628.—Monard, A. Notes de faunistique neuchateloise. [Moll. p. 112.] Bull. Soc. neuchatel. Sci. nat. 1947 (3) 70 pp. 109-115.
- 629.—Montalenti, G. & Vitagliano, G. Ricerche sul differenziamento dei sessi negli embrioni di *Sepia officinalis*. [English Summary.] Pubbl. Staz. zool. Napoli 20 1 1946 pp. 1-18.
- 630.—Moore, A. R. & Turner, R. S. Some effects of Narcoses on the nerve impulse in the squid *Loligo opalescens*. Physiol. zool. Chicago 31 3 1948 pp. 224-231 graphs.
- 631.—Morehouse, E. M. E. Stainton, 1885-1949. 23 3 1949 pp. 89-90.
- 632.—Morellet, L. & J. Le Bartonian du Bassin de Paris. [Moll. pp. 25-37.] Mém. Carte Géol. Détail Fr. 1948 pp. 25, i-viii, 1-437 text-map & plate-map.
- 633.—Morrellet, J. Deux genres inutiles de Cossmann: *Eocrassina* (Pélécypode) et *Dumasella* (Gastropode). Bull. Mus. Hist. nat. Paris (2) 20 6 1948 pp. 561-562.
- 634.—Mori, S. Daily rhythmic activities of "Martens" pearl-oyster (*Pinctada martensi* (Dunker)). [In Japanese with English résumé.] Jap. J. Malac. 15 1/4 1948 pp. 46-51 3 figs.
- 635.—Mori, S. On the respiration of *Pinctada martensi* (Dunker) in the sea water of low oxygen tension. (A preliminary note.) [In Japanese.] Jap. J. Malac. 15 1/4 1948 pp. 52-54 2 figs.
- Mori, S. *vide* Matutani, K.
- 636.—Moses, S. T. A preliminary report on the cephalopods of Baroda. [Abstract.] Proc. Indian Sci. Congr. 1949 35th 3 p. 198.
- Moussa, A. A. *vide* Gatenby, J. B.
- 637.—Mouterde, R. Le Lias inférieur a l'Ouest de la Châtre (Indre). Bull. Soc. géol. Fr. 5 13 4-5 1948 pp. 241-245.
- 638.—Muller, S. Beiträge zur Geologie der Trochtafinger Heide (Schwäbische Alb) und ihren näheren Umgebung. [Short Lists.] N. Jahrb. Min. Geol. Paläont. Stuttgart B90 3 1949 pp. 379-426 pls. xviii, xix.
- 639.—Mullerried, F. K. G. Fosiles raros de Mexico VI. El bivalvo *Pinnigena* encontrado por vez primera en Mexico y America. An. Inst. Biol. Mexico 1949 20 1-2 pp. 5-14 text-figs.
- 640.—Mullerried, F. K. G. Nota sobre el Hallazgo de Capas del Senoniano al so de Tuxtepec Oax. An. Inst. Biol. Mexico 1949 20 1-2 pp. 15-16.
- Murti, N. N. *vide* Subrahmanyam, T. V. & others.
- 641.—Murase, K. On *Venerupis philippinarum* (Adams et Reeve). Dobuts. Zasshi Tokyo 56 N. 4-6 1944 pp. 42-46 text-figs.
- 642.—Nagao, T. & Otatume, K. The fossil Corbiculids from the Palaeogene Isikari Series in the Isikari Coal-Field, Hokkaido. J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943 pp. 1-13 text-figs., pls. i-iii.
- Nates, A. G. *vide* Pelluet, D. & others.
- Navarry, T. *vide* Bardain, E. & others.
- Needler, A. B. & A. W. H. *vide* Medcof, J. C. & others.
- Nellayandar, M. *vide* Jacob, P. K.
- 643.—Neuhaus, W. Hungerversuche zur frage der Taraditären kastration bei *Bithynia tentaculata*. Z. Parasitenk. Berlin 14B 4 1949 pp. 300-319 text-figs.
- 644.—Navaz, J. M. Estudio de la ría de Pasajes en relación con su producción de moluscos comestibles. [Moll. p. 11-15.] Bol. Inst. Esp. Oceanogr. No. 11 1948 pp. 1-31 maps.
- 645.—Newell, N. D. Phyletic size increase—an important trend illustrated by fossil invertebrates. [Moll. pp. 112-116.] Evolution, Lancaster, Pa. 3 2 1949 pp. 103-124 graphs.
- 646.—Newell, N. D. Cronin, B. T. & Roberts, T. G. Upper Paleozoic of Peru 1949. 241 pp. 42 pls. & text-figs. [For Molluscs *vide* sub Cronin, B. T.]
- Nicholas, R. E. H. *vide* Comfort, A.
- 647.—Ninni, E. La vita degli animali al Lido di Venezia. Boll. Pesca Piscicoltura. Idrobiol. Roma 17 4 1941 pp. 527-559.

648.—Noda, M. On a new species of the Genus *Sphaerodoma* from the Tienhsihfu Coalfield Fengtien Province, Manchoukuo. [English with Japanese and Chinese résumé.] Bull. Cent. N. Mus. Manchoukuo No. 4 (1942) pp. 17-18 1 pl. Japan. J. Geol. Geogr. 1944 19 1-4 (Abstr. p. 11) No. 65.

Nolan, M. O. *vide* von Brand, T. & others.

649.—Noland, J. L. Determination of amino acids in invertebrates. Biol. Bull. Woods Hole 97 2 1949 pp. 263-264.

Nomejko, C. A. *vide* Loosanoff, V. L.

650.—Odhner, N. H. *Succinea sarsi* Esmark 1886 (—*elegans* Quick 1933, non Risso 1826), new to the Danish fauna. Vidensk. Medd. Dansk naturh. Foren. 111 1949 pp. 217-224 11 figs.

Oddo, F. *vide* Bacci, G.

651.—Odlaug, T. O. Effects of stabilized and unstabilized waste sulphite liquor on the Olympia Oyster *Ostrea lurida*. Trans. Amer. micr. Soc. Menasha 68 2 1949 pp. 163-182 tables & graphs.

652.—Okuda, I. The Fauna of Akkesh Bay. XIV. Solenogastre. Annot. zool. jap. 22 1943 pp. 11-14 text-figs.

653.—Oliveira, P. H. de. Estudo hidrobiológico das lagoas de Piratinenga e Itaipú. Mem. Inst. Osw. Cruz. Rio de J. 46 4 1949 pp. 673-718 pls. 1-4.

Ord, M. I. *vide* Pelluet, D. & others.

654.—Orton, J. H. Recording gonad condition for comparison in local and geographical communities. Challenger Soc. London 1948 2 20 p. 11.

655.—Orton, J. H. Notes on the feeding habit of *Capulus ungaricus*. Rep. Mar. biol. Sta. Port Erin 61 1948 [1949] pp. 29-30.

656.—Orton, J. H. Oyster Biology and Oyster-culture. London 1937 pp. 1-211 maps, graphs, text-figs. & tables.

657.—Osima, K. Tonnidae. [In Japanese.] Conchologia Asiatica 1 pt. 4 1943. [non *vidi*.]

658.—Ostergaard, J. M. Spawning and Development of some Hawaiian Marine Gastropods. Pacific Science 1950 4 2 pp. 75-115 text-figs.

659.—Ôtatumé, K. On two fossil Corbiculids from the Palaeogene Coal-bearing Tertiary of Obirasibé, Tesio Province, Hokkaidô. J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943 pp. 15-20 text-figs.

660.—Ôtatumé, K. Three species of fossil Corbiculids from the Tertiary formation of Karahuto. J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943 pp. 21-28 pl. iv.

Ôtatumé, K. *vide* Nagao, T.

Ottke, R. C. *vide* Bergmann, W.

661.—Otuka, Y. *Turricula* Dall. [In Japanese.] Conchologia Asiatica 1 pt. 3 1943. [non *vidi*.]

662.—Otuka, Y. Neogene fossils of the Ihara District, Sizuoka Prefecture, Japan. J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 pp. 1-19 pls. i, ii.

663.—Otuka, Y. Mollusca from the Miocene of Tyugohu, Japan. J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 pp. 21-45 pls. i-iv.

664.—Oyama, K. Limidae. [In Japanese.] Conchologia Asiatica 1 pt. 1 1943. [non *vidi*.]

665.—Oyama, K. Über die koreanischen *Corbicula*-Arten. Venus, Mukaisima 12 3-4 1943 pp. 150-158 pls. 5, 6.

666.—Oyama, K. Über das Vorkommen von *Hinnites corallinus* Sowerby in Bonininseln. Venus, Mukaisima 12 3-4 1943 pp. 195-197 1 fig.

667.—Oyama, K. Review of Japanese species of *Solariella*. [In Japanese.] Jap. J. Malac. 13 1943 pp. 118-122.

Oyama, K. *vide* Suzuki, K.

668.—Pacaud, A. Données expérimentales sur les matériaux non végétaux dans le régime alimentaire de *Planorbis* (*Coretus*) *corneus* Linne. Bull. Soc. zool. Fr. 74 1949 pp. 136-139.

669.—Pain, T. *Placostylus falcicula* (Gassies). J. Conch. London 1949 23 2 pp. 39-40 figs.

670.—Pain, T. The distribution of *Pila speciosa* (Philippi). J. Conch. London 23 3 1949 pp. 69-70.

671.—Pain, T. On the types of three species of *Pomacea* described by G. B. Sowerby, III. Proc. Malac. Soc. London 1949 28 1 pp. 39-40 pls. 1, 2.

672.—Panikkar, N. K. & Tampi, P. R. S. The egg mass of a Doliid gastropod mollusc from Krusadai Island. *J. Bombay nat. Hist. Soc.* **48** 3 1949 pp. 608-610 text-figs.

673.—Papp, A. Fauna und Gliederung der Sarmata im Wiener Becken. [Lists.] *Anz. Akad. Wiss. Min.* 1949 **86** pp. 256-266.

674.—Papp, A. Eine unterpliocäne Fauna (Plaisancien) von Serres (Mazedonien). [Short list.] *N. Jahrb. Min. Geol. Paläont. Stuttgart* **B1-4** 1948 pp. 75-77.

675.—Papp, A. Untersuchungen an der sarmatischen Fauna von Wiesen. *Jahrb. geol. Bundes Anst. Wien* **89** 3-4 1939 pp. 315-355 pls. ix, x.

676.—Parke, M. W. Report on Oyster Investigations 1939. *Rep. Mar. biol. Sta. Port Erin* **52** 1939 p. 9.

677.—Parker, P. Fossil and recent species of the Pelecypod genera *Chione* and *Securella* from the Pacific Coast. *J. Paleont. Menasha Wis.* **23** 6 1949 pp. 577-593 pls. 89-95.

678.—Parodiz, J. J. Contribuciones al conocimiento de los Moluscos terrestres Sudamericanos. IV. Nuevas especies de los géneros *Drymaeus* y *Proglyptus* precedentes de la República Argentina y de Bolivia. *Comun. zool. Mus. Hist. Nat. Montevideo* **2** 27 1946 pp. 1-14 text-figs., map, pl. i.

679.—Parodiz, J. J. Contribuciones al conocimiento de los Moluscos terrestres Sudamericanos. V. Especies nuevas o poco conocidas del gen. *Peronaeus* Albers 1850 de la Republica Argentina y de Bolivia. *Comun. zool. Mus. Hist. Nat. Montevideo* **2** 38 1947 pp. 1-32 text-figs.

Pasić, M. *vide* Pethovic, K.

680.—Pata, O. Contributo allo studio della stratigrafia del Pliocene sullo stretti di Messina. [List.] *Atti Acc. peloritana Messina* **47** 1945 pp. 9-17 1 fig.

681.—Pata, O. Epirogenesi, fratture ed eustatism in calabria ulteriore dal Pliocene al Tirreniano. *Historia Nat. Roma* **2** 2-4 1947 pp. 11-15 3 figs.

682.—Pattison, H. Life in an ancient Arizona Sea. Plateau, Flagstaff, Arizona **21** 1 1948 pp. 1-6 text-fig. & plates.

683.—Paulus, M. & N. Contribution a l'étude de la faunule malacologique de la Casamance (Afrique Occidentale Française). *Bull. Mus. Hist. nat. Marseille* 1948 **8** 2-3 pp. 74-93.

Paulus, M. *vide* Bayol, J.

684.—Pavlović, S. Note sur les coches à *Corbicula fluminalis* Müll. de l'Ovee Polje (Macédoine). [Fr. rés. p. 92.] *Bull. Mus. d'hist. Nat. Serbie* **1** 1948 pp. 87-92 figs. 1-3.

685.—Pejovic, D. Une nouvelle localité où l'on trouve *Pironaea polystyla* var *slavonica* (Hilber) Kuhn et *Pironaea polystyla* (Pirona) Méneghini. [In Serbian with French résumé p. 151.] *Ann. géol. Pen. Balkan Beograd* **17** 1949 pp. 148-151 text-figs.

686.—Pellegrini, O. Ricerche statistiche sulla sessualità di *Patella coerulea* L. *Boll. zool. Torino* [1949] **15** pp. 115-121.

687.—Pelluet, D., Ord, M. J. & Nates, A. G. The Cytosome of differentiating germ cells in some land Mollusca. *Trans. roy. Soc. Can.* 1949 (3) **43** [6] p. 247.

688.—Peltretra, A. La capacità regolativa dell'uovo di *Aplysia limacina* L. studiate con la centrifugazione e con le reazioni vitali. *Pubb. Staz. zool. Napoli* **18** 1939 pp. 20-49 text-figs., pls. i-iv.

689.—Pirébaskine, V. Contribution a la connaissance de l'âge du Flysch des Petites Pyrénées. *Bull. Soc. géol. Fr.* **5** 19 1-3 1949 pp. 269-270 pl. ix.

690.—Pereirã, H. F. & Gonçalves, L. I. Caramujos, caracóis e lesmas nocivos e meios de combate. *Biologico, S. Paulo* **15** 4 1949 pp. 65-73 1 fig.

691.—Perkins, N. E. British Fresh-water Molluscs. *Aquarist London* **14** 1 1949 pp. 15-16 text-figs.

Petersen, S. K. *vide* Balslov, G.

692.—Petković, K. V. [On *Lima* (*Plagiostoma*) *subrigida* Röm.] *Ann. géol. Pén. balkan* (Beograd) **15** 1938 pp. 437-438 text-figs.

693.—Petković, K. V. [On *Perisphinctes brownei* Marshallsp. Boehm.] *Ann. géol. Pén. balkan* (Beograd) **15** 1938 p. 439.

- 694.—Petković, K. V. Quelques espèces des Nerinées du Cretacé Inférieur à facies Wagoniens de Kosutnjak (environs de Beograd). [Fr. rés. p. 75.] Ann. géol. Pén. balkan (Beograd) **16** 1939 pp. 65–76 text-figs.
- 695.—Petković, K. V. Nouvelles données sur la développement et la répartition de l'Albien aux environs de Beograd. Ann. géol. Pén. balkan (Beograd) **16** 1939 pp. 131–134 text-fig.
- 696.—Petković, K. V. Le Tithon-Valangnien dans la Serbie orientale—Le problem de l'âge et de l'épaisseur des calcaires récifaux zoogènes de la Suva Planina et de dépôts semblables dans la Serbie orientale. [In Serbian with French résumé p. 40; Lists.] Ann. géol. Pén. Balkan, Beograd **17** 1949 pp. 15–44.
- 697.—Petković, K. V. & Miletic, O. Sur les Ammonites Barremiens trouvés dans les Calcaires Urgoniens de Košutnjak (environs de Belgrade) et leur importance. [In Serbian with French résumé p. 137.] Ann. géol. Pén. Balkan, Beograd **17** 1949 pp. 123–139 pls. i. ii.
- 698.—Petrbok, J. The Molluscs of the Pleistocene of Bohemia. [In Czech with English summary p. 202.] Sbor. geol. Úst. Praha **15** 1948 pp. (1) 161–(48) 208.
- 699.—Petrbok, J. Několik poznámek de gigantismu u *Helicogena pomatia* Linné. Vest. ceskosl. zool. Spolnec. Praha **8** 1940 pp. 173–176.
- 700.—Petrbok, J. Biological and historical problems in the system of *Agardhia truncatella* Pfeiffer. Vest. ceskosl. zool. Spolnec. Praha **6-7** 1939 pp. 340–345 text-fig.
- Petrillo, E. vide Boscardi, F.
- 701.—Pfeiffer, K. L. *Levantina spiriplana* (Olivier). Arch. Molluskenk. Frankfurt a/M. 1949 **77** 1/6 pp. 1–51 3 maps & diagram, pls. 1–7.
- 702.—Picard, J. Notes sur les Cyclostomes des Regions paléarétiques. Jour. de Conchyliol. Paris **89** 2 1949 pp. 62–82 text-figs.
- 703.—Pichler, W. Der Riedelteich bei Leoben. Mitt. naturn. Ver. Steierm. 1939 **75** pp. 160–165 text-figs. & graph.
- 704.—Pickford, G. E. *Vampyroreuthis infernalis* Chun au. archaie dibranchiate Cephalopod. II. External Anatomy. Dana. Rep. Copenhagen No. 82 1949 pp. 1–132 tables & text-figs.. pls. i–ix.
- 705.—Pickford, G. E. The distribution of the eggs of *Vampyroreuthis infernalis* Chun. J. Mar. Res. New Haven **8** 1 1949 pp. 73–83 tables & graphs.
- 707.—Pickford, G. E. The Vampyromorpha. A new order of Dibranchiate Cephalopoda. Vest. ceskosl. zool. Spolnec. Praha **6-7** 1939 pp. 346–358.
- 708.—Pickford, G. E. & McConaughy, B. H. The *Octopus bimaculatus* problem, a study in sibling species. Bull. Bingham Oceanogr. Coll. New Haven **12** 4 1949 pp. 1–66 text-figs.
- 709.—Pillai, K. P. The Molluscan fauna and the lime shell resources of Travancore. [Abstracts.] Proc. Indian Sci. Congr. 1949 **35th** 3 pp. 196–197.
- 710.—Pilsbry, H. A. New species of *Isomeria* and *Helicina*. Nautilus Philad. 1949 **62** 3 pp. 99–101 pl. 6, f. 1–46.
- 711.—Pilsbry, H. A. *Dissentoma*, the embryonic stage of *Cymatium martinianum* (Orb.). Nautilus Philad. 1949 **62** 4 p. 142.
- 712.—Pilsbry, H. A. *Drillia roseobasis* and *Pleurotoma albicostata* Sowerby. Nautilus Philad. 1949 **62** 3 pp. 103–104.
- 713.—Pilsbry, H. A. Review of Peruvian species of *Temesa* (Mollusca. Clausiliidae). Notulae Naturae, Philadelphia No. 214 1949 pp. 1–8 text-figs.
- 714.—Pilsbry, H. A. Peruvian land mollusks of the genus *Nenia* (Clausiliidae). Proc. Acad. nat. sci. Philad. 101 1949 pp. 215–232 pls. 17–22.
- Pitotti, L. vide Reverberi, G.
- Pittman, L. vide Hall, C.
- 715.—Platt, R. Shells take you over World horizons. Nat. geogr. Mag. Washington **96** 1 1949 pp. 33–84 text-figs., 41 col.
- 716.—Plöschinger, B. Ein Beitrag zur geologie des Salzkammergutes im Bereich von Strobl am Wolfgangsee bis zum Hang der Zwieselalm. [List, in text.] Jahrb. geol. Bundes Anst. Wien **93** 1–2 1949 pp. 1–35.

- 717.—Ponomareva, L. Infiltration of arcto-boreal fauna into Karsk Sea. [In Russian.] C.R. Acad. Sci. Moscow N.S. 1949 65 6 pp. 907-909.
- 718.—Portalés, G. P. Otro nuevo afloramiento crétácico en la Mancha (Ciudad Real). R. Soc. esp. Hist. Nat. Tomo Extraord. 1949 1946 pp. 345-359.
- 719.—Popense, W. P. Genetic lines in California Cretaceous mollusks. [Abstract.] Bull. Geol. Soc. Amer. Washington, D.C. 60 12 2 1949 p. 1951.
- 720.—Powell, A. W. B. The Paryphantiidae of New Zealand. No. VI. Distribution hybrids and new species of *Paryphana*. Rec. Auckland Inst. Mus. 1949 3 6 pp. 347-367 pls. 64-67.
- 721.—Powell, A. W. B. Biological primary types in the Auckland Museum. Rec. Auckland Inst. Mus. 1949 3 6 pp. 403-409.
- 722.—Powell, A. W. B. The species problem in New Zealand Land Snails. Trans. Roy. Soc. N.Z. 1949 77 5 pp. 202-208 text-map.
- Prenant, M. vide Gabe, M.
- 723.—Pruvot-Fol, A. De la Pretendue symétrie des Ascoglosses. Arch. Zool. exp. gén. Paris 85 1948 Notes et Revue pp. 208-212 text-figs.
- 724.—Pruvot-Fol, A. Encore un mot au sujet du mode de production de la radula des gastropodes. Bull. Soc. zool. Fr. 72 1948 pp. 123-125.
- 725.—Pruvot-Fol, A. Une dernière note au sujet du nom de *Tethys*. Jour. de Conchyliol. Paris 89 2 1949 p. 94.
- 726.—Pruvot-Fol, A. Les Porostomata, au groupes d'Opisthobranches et leurs affinités. Rev. suisse Zool. Genève 55 1948 pp. 264-266.
- 727.—Pulley, T. E. Shelled mollusks of the Texas Coast from Galveston to Port Aransas. Texas J. Sci. 1 3 1949 pp. 62-68.
- 728.—Purehon, R. D. Field Days at Dale Fort. Discovery, Norwich 9 8 1948 pp. 247-250 figs.
- 729.—Quayle, D. B. Movements in *Venerupis* (*Paphia*) *pullastra* (Montagu). Proc. Malac. Soc. London 1949 28 1 pp. 31-37 text-figs. & graphs.
- 730.—Quick, H. E. *Limapontia depressa* Alder and Hancock in Suffolk and Glamorgan. J. of Conch. 23 3 1949 p. 84.
- 731.—Quick, H. E. Slugs (Mollusca). Synopsis of the British Fauna No. 8 1949 pp. 1-29 pl. 1.
- 732.—Raabe, Z. Remarks on protozoan parasitocenose of some representatives of genus *Mytilus*. Ann. Univ. N.C. Skodowska. Lublin 4C 1 1949 pp. 1-16.
- 733.—Ramamurthy, K. The brood-pouch and nutrition of embryos in *Melanoides tuberculatus* (Muller). [Abstract.] Proc. Indian Sci. Congr. 36th 3 1949 p. 157.
- 734.—Ramirez, R. Descripción de algunos moluscos del Mioceno del Valle del Cibao de la República Dominicana. Publ. Univ. Santo Domingo 70 4 1 1949 pp. 1-43 pls. 1-7.
- 735.—Ranson, G. Prodissoconques et classification des Ostréides vivants. Bull. Mus. Hist. nat. Belg. 24 42 1948 pp. 1-12 text-figs.
- 736.—Ranson, G. *Gryphaea angulata* Lmk. est l'espèce "type" du genre *Gryphaea* Lmk. Bull. Mus. Hist. nat. Paris (2) 20 6 1948 pp. 514-516.
- 737.—Ranson, G. Note sur trois espèces lamareckiennes d'Ostréides. Bull. Mus. Hist. nat. Paris (2) 21 2 1949 pp. 248-254.
- 738.—Ranson, G. Note sur la répartition géographique des Ostréides du genre *Pycnodonta* F. de W. Bull. Mus. Hist. nat. Paris 1949 (2) 21 4 pp. 447-452.
- 739.—Ranson, G. Quelques observations sur la Biologie de *Gryphaea angulata* Lmk. Bull. Mus. Hist. nat. Paris 1949 (2) 21 5 pp. 574-579.
- 740.—Rasmussen, E. Faunistic and biological notes on marine invertebrates. I. The eggs and larvae of *Brachystomia rissoides* (Hanl.) *Eulimella nitidissima* (Mont.), *Retusa truncatula* (Brug.) and *Embletonia pallida* (Alder and Hancock). (Gastropoda marina). Vidensk. Medd. Dansk naturh. Foren. 107 1944 pp. 207-233 20 figs.
- 741.—Raven, C. P. Cyclopie par l'action de Lithium chez la Limnée (*Limnaea stagnalis* L.). Acta Anatomica. Basel 4 1947 pp. 230-247 text-figs.

742.—Raven, C. P. On the structure of cyclopic synophthalmic and anaphthalmic embryos, obtained by the action of Lithium in *Limnaea stagnalis*. Arch. neerl. zool. **8** 1949 pp. 323–352 text-figs., pls. xviii, xix.

743.—Raven, C. P. Het polaire gradiënt-veld in het ei van de Poelslak. Biol. Jaarb. Antwerpen **16** 1949 pp. 90–95.

744.—Raven, C. P. The influence of an electric field on the eggs of *Limnaea stagnalis* L. Proc. Kon. Ned. Akad. Wetensch. Amsterdam **51** 1948 pp. 1077–1090 4 figs.

745.—Raven, C. P. On maturation in the eggs of *Limnaea stagnalis* L. Bijdr. t. d. Dierk. Afl. **28** 1949 pp. 372–384 2 figs.

746.—Raven, C. P. & Simons, M. A. On the specificity of the lithium effect on the development of *Limnaea stagnalis*. Proc. Kon. Ned. Akad. Wetensch. Amsterdam **51** 1948 pp. 1232–1238.

747.—Raven, C. P. & Roborgh, J. R. Direct effects of isotonic and hypotonic lithium chloride solutions on unsegmented eggs of *Limnaea stagnalis*. Proc. K. ned. Akad. Wet. Amsterdam **52** 6 1949 pp. 614–622 tables & text-figs.

748.—Raven, C. P. & Roborgh, J. R. Direct effects of isotonic and hypotonic lithium chloride solutions on unsegmented eggs of *Limnaea stagnalis*. Proc. K. ned. Akad. Wet. Amsterdam **52** 7 1949 pp. 773–780 text-figs. & tables.

749.—Raven, C. P. & de Wit, S. D. On the influence of lithium chloride on the eggs of *Limnaea stagnalis* at the 24-cell stage. Proc. Kon. Ned. Akad. Wetensch. Amsterdam **52** 1949 pp. 28–34 2 figs.

750.—Ray, H. C. On a collection of Melaniids and Neritids (Mollusca Gastropoda) from the Andaman Islands. Rec. Indian Mus. Calcutta **45** 4 pp. 299–308 1947 text-figs.

751.—Ray, H. C. Revision of Cypraea in the collection of the Zoological Survey of India. Part I. The Families Triviidae, Eratoidae and Pediculariidae. Rec. Indian Mus. Calcutta **46** 1–4 1949 pp. 183–213.

752.—Raymont, J. E. G. Note on *Mysia undata* (Pennant). J. Conch. London 1949 **23** 2 p. 40.

753.—Raymont, J. E. G. Further observations on changes in the bottom fauna of a fertilized sea loch [Loch Craiglin]. J. Mar. Biol. Ass. Plymouth **28** 1 1949 pp. 9–19.

754.—Rees, W. J. Variation in *Purpura lapillus* Linn. Proc. Linn. Soc. London 1949 **161** 2 p. 149.

755.—[Rees, W. J.] [Editor.] Portrait of the President, Arthur Wrigley. 1945–47. Proc. Malac. Soc. London 1949 **28** 1 frontispiece.

756.—Rees, W. J. Note on the hooked squid, *Onychoteuthis banksi*. Proc. Malac. Soc. London 1949 **28** 1 pp. 43–45.

757.—Reisinger, E. Morphologie und Entwicklungsgeschichte der Wirbellosen (exbl. Orthopoda). [Moll. pp. 36–89.] Fortschr. Zool. Jena **4** 1939 pp. 70–94.

758.—Renaud, A. Étude de quelques brachiopodes et de quelques Pélécy-podes de grès à "*Dalmanella Monnieri*." C.R. Soc. géol. min. Bretagne **3-4** (1937) 1939 pp. 55–61.

759.—Renaud, A. Le Dévonien du Synclinorium médean Brest-Laval. 2me Paléontologie. [Moll. pp. 201–275.] Mém. Soc. géol. min. Bretagne **7** 2 1942 pp. 1–439 pls. i–xiv.

760.—Renaud, A. La faune des schistes et calcaires dévoniens de Brûlon, Loué - en - Charnie, Voué - en - Charnie, Ruillé-en-Champagne, Sablé (Sarthe). Bull. Soc. géol. min. Bretagne N.S. **1938** 1939 pp. 16–20.

761.—Renz, C. & Renz, O. Eine untertraadische Ammoniten fauna von der griechischen Insel Chios. Schweiz. Palaeont. Abh. **66** (1948–49) 1948 No. 1 text-figs., pls. 1–16.

762.—Reyne, A. On the structure of the shells and pearls of *Tridacna squamosa* Lam. and *Hippopus hippopus* (Linn.). Arch. néerl. Zool. **8** 1947 pp. 206–241 text-figs., pl. viii.

Ripplinger, J. vide Jullien, A.

763.—Ripsom, C. A. Reduction of the time factor in rearing *Australorbis glabratus*. Amer. Midl. Nat. Notre Dame 1949 **42** 3 pp. 757–758.

764.—Robertson, I. C. Pigmy neighbors in the snail world. Hobbies, Buffalo, N.Y. 1949 **30** 2 pp. 24–27 figs.

765.—Robertson, J. D. Ionic regulations in some marine invertebrates. [Moll. pp. 192-197.] J. exp. Biol. Cambridge **26** 2 1949 pp. 182-200 tables.

766.—Robinson, A. An introduced Pond snail in the Murray district. West Aust. Nat. Perth **2** 2 1949 pp. 47-48.

Roborh, J. R. *vide* Raven, C. P.

767.—Robson, G. C. The Cephalopoda Decapoda of the Arcturus Oceanographic Expedition 1925 [posthumous paper]. Zoologica, New York **33** 1948 pp. 115-132 text-figs. 1-18.

Rodriguez, O. *vide* Bardain, E.

768.—Roger, J. Pectinidés miocènes pliocènes et quaternaires de Syrie. Notes et Mém. Haut. Comm. Républ. Franc. Syrie et Au Liban. **3** 1940 pp. 325-349 text-maps, pls. i, ii.

769.—Roger, J. & Buge, E. L'Association Cellépure-Gastropode dans les Faluns de la Touraine. Bull. Soc. géol. Fr. (5) **17** 7-9 1948 pp. 461-470 pl. xvii.

770.—Roig, M. S. Nuevos moluscos de Cuba. Revista Soc. Malac. 'C. de la Torre' Habana 1949 **6** 3 pp. 85-88 text-map, pl. 3.

Roig, M. S. *vide* Aguayo, C. G.

771.—Roman, F. Listes raisonnées des faunes du Pliocène et du Miocène de Syrie et du Liban. Notes et Mém. Haut. Comm. Républ. Franc. Syrie et au Liban. **3** 1940 pp. 355-399 text-maps, pls. i-v.

772.—Romanini, M. G. Attività ialuronidasi della ghiandola salivari anteriori e posteriori di *Octopus vulgaris* e di *Octopus macropus*. Bol. Soc. ital. Biol. spr. **25** 8 1949 pp. 1179-1180.

773.—Rosén, B. Intrazelluläre Verdauung bei *Helix pomatia* L. Zool. Jahrb. Jena (Allg. Zool.) **60** 1941 pp. 241-252 pls. 1-3.

774.—Rosenberg, G. Neue Fossilfunde und Beobachtungen am Kalkalpennordstrand bei Wien. [Lists.] Jahrb. geol. Bundes Aust. Wien **89** 1-2 1939 pp. 177-196 text-fig., pls. i-iii.

775.—Rosenberg, H. R. The Provitamin D in Clams. Nature, London **164** 4175 1949 p. 795.

776.—Rehder, H. A. Some land and freshwater mollusks from the coastal region of Virginia and North and South Carolina. Nautilus Philad. 1949 **62** 4 pp. 121-126.

777.—Reddi, K. K., Giri, K. V. & Das, R. Thiaminase system in freshwater mussel (*Lamellindius marginalis*). [Abstract.] Proc. Indian Sci. Congr. 1948 **34th** 3 p. 39.

778.—Reverberi, G. & Pitotti, M. Ricerche sulla distribuzione delle ossidasi e perossidasi lungo il "cell-lineage" di nova a mosaico. Pubbl. Staz. zool. Napoli **18** 2 1940 pp. 250-263 text-figs.

Roberts, T. G. *vide* Newell, N. D. & others.

Roborh, J. R. *vide* Raven, C. P.

779.—Rotarides, M. Malakofaunistische Notizen II. Fragmenta faun. Hungarica **11** 1948 pp. 77-82 text-figs.

780.—Royer, J. Kleine Beiträge zur Kenntnis der märkischen Weichtierfauna. Märk. Tierw. Berlin **4** 1940 pp. 185-186.

781.—Ruggiero, G. Un nuovo "ospite nordico" nel Calabriano del Catanzarese. Historia Nat. Roma **2** 2-4 1947 p. 10 1 fig.

782.—Ruggieri, G. Alcune *Trophonopsis* del Pliocene e Postpliocene italiano. Giorn. geol. Bologna **2** **18** 1945-6 pp. 89-96 pl. vi.

783.—Ruggieri, G. Il Calabriano e il Siciliano nella Valle del Santerno (Imola). [List pp. 96, 98, 99 and 103-108.] Giorn. geol. Bologna **2** **17** 1943-4 pp. 95-113.

784.—Ruggieri, G. La malacofauna del Calabriano Romagnolo. [List.] Giorn. geol. Bologna **3** **20** 1948 pp. 63-110 pls. i-iii.

785.—Ruggieri, G. Il Terrazzo marino presiciliano della Penisola di Crotone. [List.] Giorn. geol. Bologna **3** **20** 1948 pp. 39-62 text-figs.

786.—Ruggieri, G. Il Pliocene superiore di Capocolle (Forlì). [Lists pp. 24-28.] Giorn. geol. Bologna **3** **20** 1948 pp. 19-38.

787.—Ruggieri, G. Terrazzi Quaternari a Fauna Siciliana nel Golfo di Squillace. [List pp. 82-86.] Giorn. geol. Bologna **2** **15** 1941 pp. 77-88.

788.—Rusconi, C. Los moluscos miocénicos de Cacheuta Mendoza. Rev. Mus. Hist. nat. Mendoza 1949 **3** 4 pp. 237-239 figs.

789.—Rushentzev, V. E. Some new Namurian Ammonites from the Aktubinsk area. C.R. Acad. Sci. Moscow N.S. 67 4 1949 pp. 737-740, 2 figs.

790.—Sacarrão, G. F. Études embryologiques sur les Céphalopodes. Arq. Mus. Bogaie, Lisbon 16 1945 pp. 33-70 text-fig.

791.—Sacarrão, G. F. Sobre alguns aspectos do desenvolvimento dos ovos telolecíticos e sua importância biológica geral. [Moll. pp. 132-143.] Arq. Mus. Bogaie, Lisboa 19 1948 pp. 77-163.

792.—Sadasivan, V. The rate of growth of *Cerithidea cingulatus* Gmelin (Gastropoda, Pectinibranchia). Proc. Indian Sci. Congr. 1949 35th 3 p. 198.

Saddy, J. vide Fischer, P. H.

Saget, G. vide Jullien, A. & others.

793.—St. George, R. C. C. & Wold, G. The photosensitive pigment of the squid retina. Biol. Bull. Woods Hole 97 2 1949 p. 248.

794.—Sakaguti, S. A new species of *Entomotis* from the Upper Triassic of the Kitakami mountainland. Jubilee Publ. Comm. Prof. H. Yale, etc. 1 1939 pp. 227-231 pl. 15.

795.—[Salisbury, A. E.] [Notes on the J. G. Jeffreys Collections from the Smithsonian Miscellaneous Collections 104 15 1946, 1-96.] J. Conch. London 1949 23 2 pp. 55, 56.

796.—Salisbury, A. E. A new species of *Rhiostoma*. Proc. Malac. Soc. London 1949 28 1 pp. 41, 42 pl. 3B.

Salvan, H. vide Choubert, G.

797.—Salopek, M. O naseagama sokaminama Koa Kunovac-vrela u Lici. Prirod. Istraž. mat.-prir. Razred. No. 4 1914 pp. 1-24, 7 pls. 1 fig.

798.—Salopek, M. Monografija trijađićke cefalopodne faune Kuna-gore Prilog I. Prirod. Istraž. mat.-prir. Razred. No. 13 1918 pp. 21-27 pls. i, ii.

799.—Salopek, M. Title as last—Prilog II. Prirod. Istraž. mat.-prir. Razred. No. 14 1919 pp. 165-184 pls. vi (iii)-xi (viii).

800.—Salopek, M. O Ladiničkim škrljavina hod Donjeg Pazarišta. Prirod. Istraž. mat. prir. Razred. No. 13 1918 pp. 3-20 pls. i, ii.

801.—Salopek, M. O naslagama s Daonellama u Hrvatskoj. Prirod. Istraž. mat.-prir. Razred. No. 13 1918 pp. 28-33 pls. i, ii.

802.—Sampelayo, P. H. *Pradoceras* (*Kotoceras*) *kobayashi* n. sp. del Ordoviciense de Ciudad Real. Bol. Inst. Geol. Esp. 61 1948 pp. 47-52 pls. i, ii.

Sato, T. vide H. Yabe.

Sato, G. vide D. B. McMullen & others.

803.—[Savinov, G. I.] (The fauna of the peripheral part of the middle and the upper low Carbon of the Shiznoosk elevation in Stalingrad district.) C.R. Acad. Sci. Moscow N.S. 69 1 1949 pp. 65-67.

804.—Saurin, E. Lamellibranches du Trias supérieur de Hoa-Huynh (Sud-Annam). Bull. Serv. géol. Indochine 26 3 1941 pp. 1-16 pls. i, ii.

805.—Schalie, H. v. der. The Land and Freshwater mollusks of Puerto Rico. Misc. Pub. Mus. Zool. Univ. Michigan 1948 70 pp. 1-134 maps, text-figs. pls. i-xiv.

806.—Schallek, W. The glycogen content of some invertebrate nerves. Biol. Bull. Woods Hole 97 2 1949 pp. 252-253.

808.—Schilder, F. A. Probleme und Methoden der Biostatistik. I. Berechnung der Gesamtakulichkeit. Biol. Zbl. Leipzig 66 5/6 1947 pp. 186-197 tables & graphs.

809.—Schilder, F. A. Probleme und Methoden der Biostatistik. II. Quantitative Zoogeographie. Biol. Zbl. Leipzig 66 7/8 1947 pp. 201-210 tables & graphs.

810.—Schilder, F. A. Probleme und Methoden der Biostatistik. III. Die Angleichskurse (der Trend). Biol. Zbl. Leipzig 66 11/12 1947 pp. 401-416 tables & graphs.

811.—Schilder, F. A. The variation of banding in *Cepaea*. Nautilus, Philad. 1949 62 4 pp. 116-119 tables & graph.

812.—Schindewolf, O. H. Über das Apikalende der Actinoceren (Cephal., Nautil.). Jahrb. Reichs. Bodenforsch. Berlin 62 1944 pp. 207-247 pls. 8-11, 15 text-figs.

- 813.—Schindewolf, O. H. Discosceriden (Cephal., Nautil.) im deutschen Devon. Jahrb. Reichs. Bodenforsch. Berlin 62 1944 pp. 499-533 pls. 34-42. 16 text-figs.
- 814.—Schindewolf, O. Zur Nomenklatur der Clymenien (Cephalop., Ammon.). N. Jahrb. Min. Geol. Paläont. Stuttgart B1-3 1949 pp. 64-76 text-fig.
- 815.—Schindewolf, O. H. Zur Phylogenie der Clymenien (Cephalop., Ammon.). N. Jahrb. Min. Geol. Paläont. Stuttgart B7 1949 pp. 197-209 text-figs.
- 816.—Schlesch, H. *Arion rufus* L. *empiricorum* Fér. i Danmark. Flora og Fauna, København 55 1-2 1949 p. 38.
- 817.—Schlesch, H. Janós Wagner 1906-1948. Proc. Malac. Soc. London 1949 28 1 p. 8.
- 818.—Schlickum, W. R. *Vitrina (Vitrinobrachium) brevis* am Niederrhein. Archiv. f. Molluskenk. Frankfurt a/M. 1949 78 1/3 pp. 61-62.
- 819.—Schmid, F. Orientierte Anheftung von *Ostrea vesicularis* Lamarck, *Dimyodon nilssoni* Hagenow und *Crania parisiensis* Defrance. Mitt. Geol. Staatsinst. Hamburg 19 1949 pp. 53-56 text-fig. pls. 12, 13.
- 820.—Schmidt, W. E. Die Mittelkambrische Fauna von Doberlug. Jahrb. Reichs. Bodenforsch. Berlin 62 1944 pp. 344-399 pls. 21-24.
- 821.—Schmieder, Th. Markische Funde von *Gonyodiscus (Discus) rudertus* (Stud.), *Vertigo (Vertigo) alpestris* Ald. neu für die Mark (Gastrop., Pulmon.). Mark. Tierw. Berlin 4 2/3 1940 pp. 163-170.
- 822.—Schneid, T. Über Ataxioceeraten des Nördlichen Frankenjura. Palaeontographica Stuttgart A96 1-3 1944 pp. 1-43 pls. i-xii text-fig.
- 823.—Schoenmann, R. Mollusca 470-487 text-figs. Die Welt. der Tiere. Wien. 1949.
- 824.—Schouppé, A. Die Fauna des Steinbruches von Retznei bei Ehrenhausen. [List.] Mitt. naturw. Ver. Stererm. 1949 77-78 pp. 142-144 text-fig.
- 825.—Schouppé, A. Eine Vise-Transgression am Steinberg bei Graz. [Short Lists.] Verh. geol. Bundes Anst. Wien 1946 7-9 1949 pp. 81-101 text-fig.
- 826.—Schouten, A. R. *Milax (Tandonia) sowerbii* (Fér.) in Nederland. Basteria Lisse 1949 13 4 p. 45-54 text-figs.
- Schuijf vide Hennekarn & others.
- 827.—Schuster, W. H. Over de mogelijkheden ener oestercultuur in Indonesie. Landbouw 21 1949 pp. 33-42.
- 828.—Schwarzbach, M. Die Fauna des Bug-Karbons, ihre stratigraphische und paläogeographische Bedeutung. [Moll. pp. 40-67.] Palaeontographica Stuttgart A97 1-3 1949 p. 1-74, 62 text-figs, table & pls. i-iv.
- 829.—Schwengel, J. S. A new Japanese Limpet. Nautilus Philad. 1949 62 3 pp. 97-98 pl. 6 f. 1, 1a-e.
- 830.—Schwengal, J. G. *Fusinus spectrum* (Adams & Reeve), a new record for the Gulf of Mexico. Nautilus Philad. 1949 62 3 pp. 101, 102 pl. 6 f. 2.
- 831.—Schwegler, E. Vorläufige Mitteilung über Grundsätze und Ergebnisse einer Revision der Belemnitenfauna des Schwäbischen Jura. N. Jahrb. Min. Geol. Paläont. Stuttgart B10 1949 pp. 294-306.
- 832.—Schwetz, J. Sur l'écologie de *Planorbis smithi* Preston 1910. Ann. Soc. roy. Zool. Belg. 80 1949 (1950) pp. 87-91 text-figs.
- 833.—Schwetz, J. Sur une nouvelle collection de mollusques d'eau douce du Congo belge et du Ruanda-Urundi [Lists.] Bull. Inst. Roy. Colon. Belge 20 1 1949 pp. 265-301.
- 834.—Scott, M. I. H. Molluscos del Noroeste Argentino. Acta zool. Lillo. Tucuman 6 1948 pp. 241-274 plate.
- 835.—Scott, M. I. H. Molluscos del Biotopo de Cerro Colorado. Acta zool. Lillo. Tucuman 6 1948 pp. 229-239 text-figs. pls. i, ii.
- 836.—Segerstrale, S. G. The Brackish-water fauna of Finland. Challenger Soc. London 3 1 1949 p. 20.
- 837.—Segerstråle, S. Skärjårdens lägre Havsdjur. [Moll. pp. 365-366, 380-382, 386, 391, 397 fig.] Skärjårdsbokm, Helsingfors 1948 pp. 356-400 text-figs.

838.—Selli, R. I Caratteri e le affinità delle Malacofaune quaternarie del Mar Rosso. [List pp. 6-10.] Giorn. geol. Bologna 2 17 1943-4 pp. 5-22.

839.—Sériesse, P. Deuxième note sur des *Hippurites* a replis multiples. Bull. Soc. Hist. nat. Toulouse 1949 84 1-2 pp. 17-21, 2 text-figs.

840.—Serventy, D. L. The spread of the Mediterranean snail (*Helix pisana*) on Rottnest Island. West Aus. Nat. Perth 2 2 1949 pp. 38-42.

841.—Seshaiya, R. V. A further note on the breeding, parasitism and development of the Indian freshwater mussels. [Abstract.] Proc. Indian Sci. Congr. 35th 1949 2nd pag. p. 197.

842.—Seurat, L. G. Mollusques pp. 17-23. Zoologie Saharienne. Alger. 1944 pp. 9-58.

843.—Shalem, H. L'influence de la rosée et des brouillards sur la repartition des Escargots du Levant. Jour. de Conchyliol. Paris 89 2 1949 pp. 93-107 text-map.

844.—Shimanski, V. N. The upper Carbon Nautiloides in South Ural. [In Russian.] C.R. Acad. Sci. Moscow N.S. 1949 66 5 pp. 929-932 figs.

845.—Shimansky, V. N. Some notes on evolution and geographical distribution of Cretaceous Nautiloids. C.R. Sci. Acad. Sci. Moscow N.S. 68 2 1949 pp. 385-388.

846.—Shimizu, S. First discovery of *Dictyoconites* from the Upper Triassic of the Kitakami mountainland, Northeast Japan. Jubilee Publ. Commem. Prof. H. Yale, etc. 2 1940-1 pp. 919-926 pls. 48, 49.

847.—Sieber, R. Die Turritelliden des niederösterreichischen Miozäns. [List.] An. Akad. Wiss. Wien 1949 86 pp. 151-160.

848.—Sieber, R. Eine Fauna der Grunder Schichten von Guntersdorf und Immendorf in Niederösterreich (Besirk Hollabrunn). [Lists.] Verh. geol. Bundes Arst. Wien 1946 7-9 1949 pp. 107-122.

Sigal, J. vide Dubourdiou, G.

Simons, U. A. vide Raven, C. P.

849.—Sivalingam, V. Some Ceylon fresh water snails and human schistosomes. Ceylon J. med. Sci. 1949 6 4 pp. 184-185 plates.

850.—Skramlik, E. von. Über den Kreiseauf bei den Weichtieren. Ergebn. Biol. Berlin 18 1941 pp. 88-286, 59 figs.

Smith, P. B. vide Loosanoff, V. L.

851.—Smith, A. G. & Gordon, Jr., M. Monterey Mollusca—corrections. Nautilus Philad. 1949 62 3 p. 105.

852.—Smith, M. Triton, Helmet and Harp shells, Florida, 1948. Synonymy, nomenclature, range and illustrations. pp. i-v, 1-57 pls. 1-16.

853.—Sokolov, B. S. Contribution to the knowledge of Tertiary and Early Quaternary stratigraphy deposits of the Narinsk depression (Tian-Shan). [In Russian.] C.R. Acad. Sci. Moscow N.S. 1946 66 4 pp. 681-684.

Somner, H. vide Stranger, D. W.

854.—Sorensen, A. Some observations on Haliotidae (abalones) and their world distribution. Nautilus Philad. 1949 62 4 pp. 138-142.

855.—Sornay, J. & Tessier, F. Ammonites nouvelles du Maestrichtien du Sénégal. Bull. Soc. géol. Fr. 5 19 1-3 1949 pp. 245-249 pl. vii & 1 fig.

856.—Sproston, N. G. A preliminary survey of the plankton of the Chu-San region, with a review of the relevant literature. Sinensia, Shanghai 1949 20 1-6 pp. 58-161 text-figs.

857.—Stainforth, R. M. The Haunston fauna in the Zapotal sands of Southwest Ecuador. J. Paleont. Menasha, Wis. 23 2 1949 pp. 155-156.

858.—Standen, O. D. Experimental Schistosomiasis. I. The Culture of the snail vectors *Planorbis boissyi* and *Bulinus truncatus*. Ann. Trop. Med. Parasit. L'pool. 43 1949 pp. 13-22.

859.—Steenberg, C. M. Études sur l'anatomie et la systématique due genre *Eremina* (Gastéropodes, Pulmonés). K. danske Vidensk. Selsk. Biol. Midd. 20 14 1949 pp. 1-28 text-figs. pls. i-x. [Posthumous paper, edited by G. Mandahl-Barth.]

860.—Steintoff, U. Beiträge zur Lebensgeschichte vom *Monacha rubiginosa* und *Vertigo substriata* (Gastropoda). Arch. f. Malak. 78 4/6 1949 pp. 159-163.

861.—Stephenson, T. A & A. Report on second visit to North America during 1948 pp. 1-6. [Title only.]

862.—Stevanović, P. La faune et la composition du Loess Marecageus a Beograd. [List with notes.] Fr. rés. p. 42. Ann. géol. Pén. balkan (Beograd) **16** 1939 pp. 28-44.

863.—Stevanović, P. M. Données stratigraphique complémentaires sur les couches de la Serbie Occidentale et de Choumadie. (Fr. rés. p. 37.) Bull. Mus. d'hist. Nat. Serbe **2** 1949 pp. 9-43 8 text-figs.

864.—Stevanović, P. M. Données stratigraphique complémentaires sur les couches miocènes. [In Serbian.] Bull. Mus. d'hist. Nat. Serbe **2** 1949 pp. 44-48 pl. 1 map.

Stevanović, P. M. *vide* Eberzin, A. G.

Stek, V. D. *vide* Hennekam.

Stone, R. *vide* McMullen, D. B.

865.—Stoyanow, A. Occurrence of Texan Peruvian Ammonoids in Arizona. [Abstract.] Bull. Geol. Soc. Amer. Washington, D.C. **60** 12 2 1949 p. 1946.

866.—Stoyanow, A. Lower Cretaceous stratigraphy in South-Eastern Arizona. [Moll. pp. 61-130.] Mem. Geol. Soc. Amer. Washington D.C. **38** 1949 pp. 1-156 pls. 1-28 map.

867.—Strain, H. H. Hopkinsiastianthin, a xanthophyll of the sea slug *Hopkinsea rosacea*. Biol. Bull. Woods Hole **97** 2 1949 pp. 206-209.

868.—Stranger, D. W., Wikholm, D. M., Mold, J. D. & Sommer, H. Paralytic shellfish poison. IV. Bases accompanying the poison. V. The primary source of the poison, the marine plankton organism, *Gonyaulax catanella*. J. biol. Chem. Baltimore **177** 1 1949 pp. 1-6, 7-11 tables.

869.—Stratton, L. W. Colonization of Land snails. J. Conch. London **1949** **23** 2 p. 43.

870.—Stromer, E. Die jungtertiäre Fauna des Flinzes und des Schweiss-Sandes von Münches. Nachträge. Abh. bayer. Akad. Wiss. 1940 N.F. No. 48 pp. 1-103 pls. i-iii. [Moll. pp. 59-61. List.]

871.—Strong, A. M. Additional Pyramidellidae from the Gulf of California. Bull. S. Calif. Acad. Sci. **48** 2 1949 pp. 71-93 pls. 11, 12.

Strong, A. M. *vide* Hertlein, L. G.

872.—Subrahmanyam, T. V., Karandikar, K. R. & Murti, N. N. The Marine Pelecypoda of Bombay. J. Univ. Bombay-N.S. **17** N.S. 5 No. 25 1949 pp. 50-81 text-figs.

873.—Sugiyama, T. & Asao, S. On *Nerinea* cf. *visurgis* Roemer from the Torinosu-Limestone, Japan. [Japanese with English résumé.] Jour. Geol. Soc. Japan **49** (1942) pp. 434-438. 1 pl. abs. 67.

874.—Šuklje, F. Gornjoiniocenske naslage sela Gore kraj Petrinje. Prirod. Istraž. mat.-prir. Razred. No. **4** 1914 pp. 25-42 2 pls. 1 fig.

875.—Sullivan, C. M. Bivalve larvae of Walpeque Bay, P.E.I. Bull. biol. Board Canada **77** 1948 pp. 1-36 pls. i-xxii.

876.—Susuki, K. *Lepidodesma* Simpson. [In Japanese.] Conchologia Asiatica **1** pt. 2 1943. [Non *vidi*.]

877.—Suzuki, K. Zwei neue tertiäre *Corbicula*-Arten aus Nord-Sachalin. Venus, Mukaisima **12** 3-4 1943 pp. 159-171 pls. 7, 8.

878.—Suzuki, K. A new species of *Cristaria* from the Isikari Group in Hokkaido. [In Japanese.] Jap. J. Malac. **15** 1/4 1948 pp. 44-46, 3 figs.

879.—Suzuki, K. & Isizuka, K. On the variation of *Nuculana confusa* (Hanley) with description of a new subspecies. [In Japanese with English summary.] Jap. J. Malac. **13** 1943 pp. 38-64 18 figs. pls. 1, 2.

880.—Suzuki, K. & Oyama, K. Überblick über die Corbiculiden Ostasiens. Venus, Mukaisima **12** 3-4 1943 pp. 138-149.

881.—Suzuki, K. & Oyama, K. Freshwater shells from the coal-bearing Tertiary formations in Mie-ken, Japan. [In Japanese.] Jap. J. Malac. **15** 1/4 1948 pp. 36-44, 5 text-figs.

882.—Sylvest, O. Copulation observed in *Viviparus fasciatus* (O. F. Müller). Hydrobiologia. Den Haag **1** 3 1949 pp. 309-311 fig.

883.—Szijj, J. & Vágvölgyi, J. Contributions to the Molluscan fauna of the Börzsöny Mts. Fragmenta faun. Hungarica 11 1948 pp. 33–36.

884.—Taki, I. Collecting shells in Central China. [In Japanese.] Venus, Tokyo 10 1940 pp. 110–119, 17 figs.

885.—Taki, I. Anatomical study of *Cipangopaludina miguiai* Kuroda. [In English with Japanese résumé.] Venus, Tokyo 10 1941 pp. 131–134, 8 figs.

886.—Taki, I. On keeping Octopods in an aquarium for physiological experiments, with remarks on some operative techniques. [English with Japanese summary.] Venus, Tokyo 10 3/4 1941 pp. 140–156, 4 figs.

887.—Taki, I. On the variation in the colour pattern of a bivalve, *Venerupis philippinarum*, with special reference to its bilateral asymmetry. [English with Japanese summary.] Venus, Tokyo 11 2/3 1941 pp. 70–87, 51 figs.

888.—Taki, I. The mollusca of the Inland Sea of Japan (1). Venus, Mukaisima 12 1/2 1942 pp. 64–80, 15 text-maps & figs.

889.—Taki, I. The Mollusca of the Inland Sea of Japan (2). [In English with Japanese résumé.] Jap. J. Malac. 13 1/4 1943 pp. 11–118, 14 text-figs.

Taki, I. *vide* Kanamaru, T.

Tampa, P. R. G. *vide* Panikkar, N. K.

890.—Tanzi & Kanamaru [T.]. *Diala vitrea* Sowerby used as a fertilizer. [In Japanese.] Venus, Tokyo 10 3/4 1941 p. 184.

891.—Tasch, P. A new fossil locality in the Lower Cambrian Monkton formation of Vermont. Canad. Field Nat. 63 5 1949 pp. 210–211 table & text-map.

Taub, R. *vide* Walsh, J. H.

892.—Tauber, A. F. Die Terediniden der Wiener Miozäns. Anz. Akad. Wiss. Wien 1949 86 pp. 120–124.

893.—Tavani, G. Rudiste ed altri Molluschi cretacei dell Migiurtinia (Africa orientale). Palaeontogr. ital. Pisa 46 (n.s. 16) 1949 pp. 1–40 pls. i–iv, 2 text-figs.

Taylor, L. H. *vide* Herber, E. C.

894.—Tchang-Si. Recherches limnologiques et zoologiques sur le lac de Kunming, Yunnan. Contr. Inst. Zool. Peiping. 4 1940 pp. 1–24 graphs & map.

895.—Tchang, Li & Hsia, W. P. The regional differences and the sexual dimorphism of two snails, *Margarya melanioides* Nevill and *Margarya monodi* Dautzenberg & Fischer, from the West coast of Kunming Lake. [Chinese summary pp. 76–77.] Contr. Inst. Zool. Peiping 5 2 1949 pp. 67–77.

896.—Tchang, Si & Tsi, C. Y. A revision of the genus *Margarya* of the family Viviparidae. [Summary in Chinese pp. 24, 25.] Contr. Inst. Zool. Peiping 5 1 1949 pp. 1–25 text-figs. pls. i–iii.

897.—Tuchert, C. Notes on Eocene Nautiloids from Victoria. J. Min. Geol. Dept. Mines Victoria 3 1 1947 pp. 40–42 text-figs.

898.—Teichert, C. New Nautiloids from the older Tertiary of Victoria. J. Min. Geol. Dept. Mines Victoria 3 2 1947 pp. 48–51 text-figs.

Teichert, C. *vide* Thomas, D. E.

899.—Teichert, C. & Cotton, B. C. A new *Aturia* from the Tertiary of South Australia. Rec. S. Aust. Mus. Adelaide 9 2 1949 pp. 255–256.

900.—Teramachi, A. An attempt to find a new collecting field of shells in Prov. Satsuma, with a description of a new limpet, *Notoacmea fuscoviridis*. Jap. J. Malac. 15 5/8 1949 pp. 90–93.

901.—Teramachi, A. & Kira, T. On the natural habitat and vertical distribution of marine shells inhabiting around Japan. [In Japanese.] Venus, Tokyo 11 2/3 1941 pp. 94–96.

Termier, G. *vide* Henri, M.

902.—Termier, H. & G. Role des Aviculopectinidae dans la Morphogénèse des Dysodontes Mésozoïques. Bull. Mus. Hist. nat. Paris (2) 21 2 1949 pp. 292–299 text-figs. 10.

903.—Tesch, J. J. Dana Report No. 34. Heteropoda. Dana Rep. Copenhagen No. 34 1949 pp. 1–53, 44 text-figs. pls. i–v.

Tessier, F. *vide* Sornay, J.

Thaureaux, J. *vide* Fauner-Frémont, E.

- 904.—Theobald, N. & Maubeuge, P. L. Paleographie du jurassique inferieur et moyen dans le Nord-Est de la France et la Sud-Ouest de L'Allemagne. [Short lists in text.] Ber. naturf. Ges. Freiburg 1949 **39** pp. 249-320 pl. A, B, C, tables & figs.
- 905.—Thomas, H. D. & Davis, A. G. The Pterobranch Rhabdopleura in the English Eocene. [Lists pp. 14-17.] Bull. Brit. Mus. (Nat. Hist.) Geol. 1949 **1** 1 pp. 1-19 text-figs. pls. 1-3.
- 906.—Thomas, D. E. & Teichert, C. A lower Ordovician Nautiloid from Bendigo, Victoria. J. Min. Geol. Dept. Mines Victoria **3** 1 1947 pp. 50-51. text-fig.
- Thompson, T. F. *vide* Woodring, W. P.
- 907.—Thore, S. Investigations on the "Dana" Octopoda. Part I. Bolitaenidae, Amphitretidae, Vitreledonillidae and Alloposidae. Dana Rep. Copenhagen No. 33 1949 pp. 1-35. 69 text-figs. & charts.
- 908.—Thore, S. Cephalopoda collected by The "Skagerak" Expedition in the Eastern Atlantic, 1946. Göteborgs Vetensk. Saml. Handl. 1948 (6B) **5** 15 pp. 1-12.
- 909.—Thorson, G. Lidt om Havsneglenes forplantning. Dyr i Natur Mus. Kobenhavn 1941 pp. 11-23. 17 text-figs.
- 910.—Thorson, G. Notes on the egg-capsules of some North-Atlantic prosobranchs of the genus *Troschelina*, *Chrysodomus*, *Volutopsis*, *Sipho* and *Trophon*. Vidensk. Medd. Dansk naturh. Foren. **104** 1940 pp. 251-265. 9 figs.
- 911.—Thurgood, A. & W. Mollusca of Grange-over-Sands, Lancashire. [Land.] J. Conch. London 1949 **23** 2 pp. 48, 49.
- 912.—Thurgood, W. The mollusca of the Leeds Naturalists Club and Scientific Associations Area. J. Conch. London **23** 3 1949 pp. 73-83 text-map.
- 913.—Tiba, R. Distribution of *Astraea japonica* and temperature of waters. [In Japanese.] Venus, Tokyo **10** 1940 pp. 107-109.
- 914.—Tiba, R. Sexual dimorphism in some species of *Buccinidae*. [In Japanese with English Summary.] Venus, Tokyo **11** 2/3 1941 pp. 87-94. 4 figs.
- 915.—Tiba, R. A statistical test of the shell of the genus *Tugali* of Japan. Venus, Mukaisima **12** 3-4 1943 pp. 183-195. 4 figs. 4 tabs. 4 graphs.
- Thaurcause, J. *vide* Fauvre-Fremont, E.
- 916.—Tinker, S. The Hawaiian Tun Shells. Pacific Sci. Honolulu **3** 4 1949 pp. 302-306 text-figs.
- 917.—Tixier, R. & Lederer, E. Sur l'haliotixioline, pigment principal des coquilles d'*Haliotis cracherodii*. C.R. Acad. Sci. Paris **228** 21 1949 pp. 1669-1671.
- 918.—Tobien, H. Über die Lebensweise der Ascoceraten (Cephal., Nautil.). N. Jahrb. Min. Geol. Paläont. Stuttgart **B10** 1949 pp. 307-323 text-figs.
- 919.—Tortonese, E. Note intorno alla fauna e flora marine dell'Isola di Rosi (Mar Eggeo). [Moll. list p. 18.] Boll. Pesca Piscicoltura. Idrobiol. Roma **23** 2 N.S. 1 1947 pp. 13-20.
- 920.—Troedsson, G. Om fynd av rätiska fossil i Skåne. [English summary pp. 548, 549.] Geol. Fören. Stockh. Förh. **70** 4 1948 pp. 528-550 text-figs.
- 921.—Troelsen, J. C. Contributions to the Geology of the area round Jørgen Brønlunds Fjord, Peary Land, North Greenland. [Moll. p. 18 (Ordovician).] Medd. Grønland 1949 **149** 2 pp. 1-29 text-figs. & map.
- 922.—Trueman, E. R. The ligament of *Tellina tenuis*. Proc. zool. Soc. London **119** 1949 pp. 717-742 text-figs. graphs & table.
- 923.—Tsi, C-Y. *vide* Tehang-Si.
- 924.—Turner, R. D. The family Tonnidae in the Western Atlantic. Johnsonia Cambridge U.S.A. **2** 26 1948 pp. 165-192 text-figs. "plates" 74-85.
- Turner, R. D. *vide* Clench, W. J.
- Turner, R. S. *vide* Moore, A. R.

925.—Tyler, A. Properties of Fertilizin and related substances of eggs and sperm of Marine Animals. *Amer. Nat.* 1949 **83** 811 pp. 195–219 text-figs. & tables.

926.—Tynbati, M. Zoological observations on Mollusca. (1) On *Amalthea conica* Schumacher. [In Japanese.] *Jap. J. Malac.* **13** 1–4 1943 pp. 123–124, 2 text-figs.

Vagvolgyi, J. *vide* Szijj, O.

Valle, A. *vide* Bianchi, C. & others.

927.—Vašiček, M. New Pelagic Opisthobranchia from the Moravian Tortonian. [Russ. res. p. 34. Engl. res. p. 35.] *Věstník Stát. Úst. Československi Rep.* **24** 1949 pp. 31–36 pl. i.

928.—Vasserot-Stoeffler, J. Observations sur le mode d'alimentation des Patelles. *Jour. de Conchyliol. Paris* **89** 3 1949 pp. 187–188.

929.—Vatova, A. Rapporti tra temperatura, salinità e deflussi nell'alto Adriatico e Loro importanza per la biologia marina. *Boll. Pesca Piscicoltura. Idrobiol. Roma* **22** 1946 pp. 22–27 graph.

930.—Vatova, A. Le zoocenosi bentoniche dell'Adriatico. *Boll. Pesca Piscicoltura. Idrobiol. Roma* **22** 1946 pp. 131–139 map.

931.—Vatova, A. La Fauna bentonica dell'Alto e Medio Adriatico. *Nova Thalassia, Venezia* **1** 3 1949 pp. 1–110 tables i–vi in text & pls. (tables) vii–xxxvii.

932.—Vatova, A. Caratteri di alcune Facies bentoniche della Laguna Veneta. *Nova Thalassia, Venezia* **1** 4 1949 pp. 3–13.

933.—Vatova, A. Caratteri della fauna bentonica dell'Alto e Medio Adriatico e zoocenose cui dà origine. [Summary in English.] *Pubb. Staz. zool. Napoli* **21** 1947 pp. 50–64, tables, pl. 1.

934. Vecchia, O. Il Liassico tra il Sebino e la Val Cavallina. [Short lists only.] *Riv. ital. Paleont. Paoia* **55** 3 1949 pp. 89–113 text-figs.

935. Vecchia, O. Su alcuni nomi generici di Ammonici liassici. [Summary in English.] *Riv. ital. Paleont. Milan* **55** 4 1949 p. 139.

936.—Venmans, L. A. W. C. *Malacologische aantekeningen. Basteria Lisse* 1949 **13** 1–3 pp. 43–44.

937.—Venmans, L. A. W. C. *Malacologische aantekeningen. 3 Eemfossielen. Basteria* **13** 1949 pls. 54–63 fig.

938.—Verdcourt, B. *Mollusca [Records Report for Bedfordshire]. Bedfordshire Nat.* 1949 No. 3 pp. 25–26.

939.—Verdcourt, B. References to the speed of land mollusca. *J. Conch. London* 1949 **23** 2 p. 47.

940.—Verdcourt, B. *Ancylus fluviatilis* Müller in stagnant water. *J. Conch. London* **20** 3 1949 p. 93.

941.—Verdcourt, B. The Radulae of the British non-marine Mollusca vii [*Hydrobia*]. *Microscope* 1948 **7** 1 pp. 19–24 figs.

942.—Verdcourt, B. Alteration in Nomenclature. *The Microscope* 1948 **7** pp. 25–26.

943.—Verdcourt, B. The Radulae of the British non-marine Mollusca viii [*Amnicola*]. *Microscope* 1948 **7** 2 pp. 34–37 figs.

944.—Verdcourt, B. The Radulae of the British non-marine Mollusca ix [*Bithynia*]. *Microscope* 1948 **7** 3 pp. 69–74 figs.

945.—Verdcourt, B. The Radulae of the British non-marine Mollusca xa [*Viviparus*]. *Microscope* 1948 **7** 4 pp. 104–107 figs.

946.—Verdcourt, B. The Radulae of the British non-marine Mollusca xb [*Viviparus*]. *Microscope* 1949 **7** 5 pp. 118–120 figs.

947.—Verdcourt, B. The Radulae of the British non-marine Mollusca xi [*Valvata*]. *Microscope* 1949 **7** 7 pp. pp. 188–193 figs.

948.—Verdcourt, B. The Radulae of the British non-marine Mollusca xii [*Pomatias*]. *Microscope* 1949 **7** 8 pp. 219–222 figs.

949.—Verdcourt, B. The Radulae of the British non-marine Mollusca xiii. *Microscope* 1949 **7** 9 pp. 242–243 figs.

950.—Verrill, A. H. Some new West Indian Shells, a new *Astraea* from Barbados. *Mollusca Tavares*, **2** 3 1947 p. 70 plate.

951.—Vialli, V. Nuova fauna ad Ammoniti del Barrenicano superiore Lombardo. Atti Soc. ital. Milano 1949 88 1-2 pp. 35-64 pl. 1.

952.—Vidal y López, M. Sobre una rara especie pirenaica. R. Soc. esp. Hist. Nat. Tomo Extraord. 1949 1946 pp. 189-190.

953.—Viergever, J. Schouwens Zuid-dijk. Natura 46 1949 pp. 78-79 3 figs.

954.—Vinogradova, Z. A. The chemical composition of invertebrates in the Black Sea. [In Russian]. C.R. Acad. Sci. Moscow N.S. 1949 65 6 pp. 891-894 diagrams.

955.—Viola, V. Diagnosi di forme nuova. Riv. ital. Paleont. Milano 55 2 1949 p. 83 text-figs.

Vitagliano, G. vide Montalenti, G.

956.—Voous, K. H. The morphological anatomical, and distributional relationship of the Arctic and Antarctic Fulmars (Aves, Procellariidae) [Stomach contents: Cephalopods and Pteropods]. Ardea 37 1949 pp. 113-133, 2 figs, pl. ix.

957.—Vogel, R. Zur Kenntnis der Nacktschnecken insbesondere ihrer Verbreitung in Württemberg. Jh. Ver. vaterl. Naturk. Württemb. 94 1938 pp. 169-179 text-fig.

958.—Vokes, H. E. The hinge and marginal pectinations of *Nuculoidea opima* (Hall), type of *Nuculoidea* Williams and Bregar. J. Wash. Acad. Sci. 39 11 1949 pp. 361-363 text-fig.

959.—Von Brand, T., Nolan, M. O., and Mann, E. R. Observations on the respiration of *Australorbis glabratus* and some other aquatic snails. Biol. Bull. Woods Hole 95 1948 pp. 199-213. Tables and graphs.

960.—Vos, A. P. C. de. Enige hydrobiologische waarnemingen op Vlieland Bijdr. t. d. Dierk. Afl. 28 1949 pp. 540-542.

961.—Voss, G. L. Notes on a specimen of *Octopus hummelincki* Adam from the Florida Keys. Rev. Soc. Malac. 'Carlos de la Torre' Habana 7 1949, 3, 4, pl. 1.

Ubaglis, G. vide Ancion & others.

Unny, M. M. vide Chidambaram, K.

Valle, A. vide Bianchi, C. & others.

Wald, G. vide St. George, R. C. C.

962.—Walker, F. T. *Tellina magna* found in Orkney. Nature, London 163 4148 1949 p. 682.

Watson, J. L. vide Azim, L. A.

963.—Warwick, T. The colonization of bomb-crater ponds at Marlow, Buckinghamshire. J. Animal Ecol. 1949 18 pp. 137-141.

964.—Webb, G. R. Studies of the sex-organs of mating polygyrid land-snails. Trans. Ill. Acad. Sci. 40 1947 pp. 218-227, 2 figs.

965.—Weber, E. Ein Beitrag zur Kenntnis der Rossfeldschichten und ihrer Fauna. N. Jahrb. Min. Geol. Paläont. Stuttgart 86 2 1942 pp. 247-281 text-figs & tables, pls. xii-xvi.

967.—Weber, N. A. Late summer invertebrates, mostly insects, of the Alaskan Arctic Slope. Ent. News 60 5 1949 pp. 118-128.

968.—Weel, P. B. v. Some notes on the African giant snail, *Achatina fulica* Fér. III. Observations on the biology. Chronica Naturae 104 1948 pp. 335-336.

969.—Weel, P. B. v. Some notes on the African giant snail *Achatina fulica* Fér. IV. On its biological balance and means of destruction. Chronica Naturae 105 1949 pp. 25-27 fig.

970.—Weel, P. B. v. The rhythmical production of enzymes in the glandula media intestini of *Achatina fulica* Fér. during the first hours of digestion. [Preliminary note.] Chronica Naturae 105 1949 pp. 53-55 fig. & table.

971.—Weiler, W. Die Otolithen aus dem Vang-Tertiar Süd-Rumäniens. Senckenbergiana, Frankfurt a.M. 1949 30 4-6 pp. 291-293 pls. 1-6.

972.—Welsh, J. H. & Taub, R. The action of choline and related compounds on the heart of *Venus mercenaria*. Biol. Bull. Woods Hole 95 1948 pp. 346-353 graphs.

973.—Wenig, K. & Halacka, K. Problem of the existence of ascorbic acid in the snail (*Helix pomatia*). Vest. ceskosl. Zool. Společ. Praze. 12 1948 pp. 231-237.

974.—Wenz, W. Gastropoda. Teil 4. Prosobranchia. Handb. Paläozoologie 6 6.1 1940 pp. 721-960.

975.—Werner, B. Die amerikanische Pantoffelschnecke *Crepidula fornicata* L. im Nordfriesischen Wattenmeer. Zool. Jahrb. Jena (Syst.) 1949 77 pp. 449-488 text-figs.

976.—White, K. M. *Musculus lebourae*, new species. Proc. Malac. Soc. London 1949 28 1 pp. 46-49 text-figs., pl. 3A.

Wikholm, D. M. *vide* Stranger, D. W. & others.

977.—Williams, L. C. Enlightened Africa. Scient. Monthly, Lancaster, Pa. 1949 68 3 pp. 199-207 figs.

978.—Wilson, Jnr., C. W. Pre-Chattanooga stratigraphy in Central Tennessee. [Moll. pp. 119, 143, 207, 251 pls. 10, 13, 19, 27.] Bull. Geol. Surv. Tennessee 56 1949 pp. 1-407 maps, table, text-figs., pls. 1-28.

979.—Winckworth, R. A new name for *Leuconia* Gray. J. Conch. London 1949 23 2 p. 38.

980.—Winckworth, R. [Obit. Note on the late James Hornell.] J. Conch. London 1949 23 2 p. 53.

981.—Winckworth, R. Cecil Price-Jones 1863-1943. Proc. Malac. Soc. London 1949 23 1 p. 1.

982.—W[inckworth], R. Arthur William Rogers 1872-1946. Proc. Malac. Soc. London 1949 23 1 pp. 1-2.

983.—W[inckworth], R. Mathew William Kemble Connolly 1872-1947. Proc. Malac. Soc. London 1949 23 1 p. 2.

984.—Winckworth, R. Harold Charles Winckworth 1878-1947. Proc. Malac. Soc. London 1949 23 1 p. 3.

985.—Winckworth, R. Walter Edward Collinge 1867-1947. Proc. Malac. Soc. London 1949 23 1 pp. 3-4.

986.—Winckworth, R. D'Arcy Wentworth Thompson 1860-1948. Proc. Malac. Soc. London 1949 23 1 p. 5.

987.—Winckworth, R. Alfred James Peile 1868-1948. Proc. Malac. Soc. London 1949 23 1 pp. 5-7.

988.—Winckworth, R. Shells used as horns. Proc. Malac. Soc. London 1949 23 1 pp. 37-38 text-figs.

989.—Wirz, A. (In B. Peyer, Die Triasfauna der Tessiner Halkalpen XV.) XV. Beiträge zur Kenntnis des Ladinikums im Gebiete des Monte San

Giorgio. [Mollusca pp. 49-54.] Schweiz. Palaeont. Abh. 65 (1944-47) 1945 No. 2 pp. 1-84 text-figs., pls. 74-76.

990.—Wirtz, D. Die Fauna des Sylter Crag und ihre Stellung im Neogen der Nordsee. Mitt. Geol. Staatsinst. Hamburg 19 1949 pp. 57-76 pls. 14-16.

991.—Wittmann, O. Zur Stratigraphie des Doggers längs der Rheintal-flexur bei Lörrach und am Röttler Schloss. Ber. naturf. Ges. Freiburg 1949 39 pp. 149-195.

Wald, G. *vide* St. George, P. C. C.

992.—Woodring, W. P. & Thompson, T. F. Tertiary formation of Panama canal zone and adjoining parts of Panama. [Lists in text.] Bull. Amer. Assoc. Petrol. Geol. Oklahoma 33 2 1949 pp. 223-247 map, graph.

993.—Wright, C. W. & Wright, E. V. The Cretaceous Ammonite genera *Dicohoplites* Spath and *Hyphoplites* Spath. Quart. J. Geol. Soc. London 104 4 1949 pp. 477-497 pls. xxviii-xxxii.

994.—Wrigley, A. The London clay at Lower Swanwick, Hampshire. Bull. Brit. Mus. (N. Hist.) Geol. 1 1 1949 pp. 13-19.

995.—Wrigley, A. A. S. Kennard 1870-1948. Jour. of Conchology 23 1 1948 p. 20.

996.—Wrigley, A. T. D. A. Cockerell 1866-1948. Jour. of Conchology 23 1 1948 p. 19.

997.—Wrigley, A. Alfred Santer Kennard 1870-1948. Proc. Malac. Soc. London 1949 23 1 pp. 4-5.

998.—Wrigley, A. English Eocene and Oligocene Naticidae. Proc. Malac. Soc. London 1949 23 1 pp. 10-30 text-figs.

999.—Wrigley, A. [For portrait see Rees, W. J.]

1000.—Wurtz, C. B. Something more than slow (Snails—World travellers). Frontiers, Philadelphia 1950 14 4 pp. 101-103 text-figs., map p. 106.

1001.—Wurtz, C. B. Some snail records from South-Eastern Ohio. Nautilus Philad. 1949 62 3 pp. 91-93.

1002.—Wurtz, C. B. Dr. George H. Clapp. [Notice of death.] Nautilus Philad. 1949 62 4 p. 143.

- 1003.—Wurtz, C. B. *Quadrula (Quincuncina) guadalupensis* sp. nov. (Unionidae: Pelecypoda). Notulae Naturae, Philadelphia 1950 No. 224 pp. 1-3 figs. 1-5.
- 1004.—Yabe, H. & Sato, S. A new bivalve from the Jurassic Torinosu Series of the Abukuma Mountainland (English). Proc. Imp. Acad. Tokyo 18 (1942) pp. 251-254. [Abs. 66.]
- 1005.—Yamada, M. [On *Turbo cornutus* Solander. In Japanese.] Dobuto. Zasshi Tokyo 56 No. 11-12 1946 pp. 5-10.
- 1006.—Yamaguti, M. An ecological observation of *Melanoides reiniana* in Lake Tyuzenzi. [In Japanese.] Venus, Tokyo 10 1940 pp. 109-110 2 figs.
- 1007.—Yamamoto, T. On the distribution of Cephalopods in Korea. [Japanese with English summary.] Venus, Tokyo 11 4 1942 pp. 126-133.
- 1008.—Yamamoto, T. On the ecology of *Octopus variabilis typicus* (Sasaki), with special reference to its breeding habits. Venus, Mukaisima 12 1-3 1942 pp. 9-20 10 text-figs., tables.
- 1009.—Yamamoto, T. Sexual dimorphism of *Loligo bleekeri* and *Idiosepius paradoxus* on their mantle length. [In Japanese.] Jap. J. Malac. 15 1949 pp. 94-96 2 figs.
- Yamamoto, T. vide Uchida, K.
- 1010.—Yen, T. C. Further note on some Tertiary Gastropods of Yunnan (China). Arch. Molluskenk. Frankfurt a.M. 1949 78 1/3 p. 100.
- 1011.—Yen, T. C. Corrections of fossil localities. J. Paleont. Menasha, Wis. 23 3 1949 p. 329.
- 1012.—Yen, T. C. Review of the Lower Cretaceous fresh-water molluscan faunas of North America. [Lists.] J. Paleont. Menasha, Wis. 23 5 1949 pp. 465-470.
- 1013.—Yen, T. C. Nomenclatural Notes. A new name for *Carinorbis* Yen. J. Paleont. Menasha, Wis. 23 5 1949 p. 573.
- 1014.—Yenne, K. A. *Pedioceras*, a synonym of *Crioceras* (*Pseudocrioceras*). J. Paleont. Menasha, Wis. 23 6 1949 pp. 623-624 pl. 102.
- 1015.—Yonge, C. M. On the structure and adaptations of the Tellinacea deposit-feeding Eulamellebranchia. Philos. Trans. London 234B 609 1949 pp. 29-76 29 text-figs.
- 1016.—Yosida, H. On the Veligers and young shells *Cardium muticum* Reeve. [Japanese with English résumé.] Venus, Tokyo 10 1940 pp. 87-91 9 figs.
- 1017.—Yoshida, H. A remarkable new *Calliostoma* from Japan. [Japanese and English.] Jap. J. Malac. 15 1/4 1948 pp. 33-36 3 text-figs.
- Young, J. Z. vide Boycott, B. B.
- 1018.—Youngquist, W. The Cephalopod fauna of the White Pine Shale of Nevada. J. Paleont. Menasha, Wis. 23 3 1949 pp. 276-305 pls. 56-64.
- 1019.—Youngquist, W. The Cephalopod fauna of the White Pine Shale of Nevada: Supplement. J. Paleont. Menasha, Wis. 23 6 1949 pp. 613-616.
- Youngquist, W. vide Miller, A. K.
- Youngquist, W. vide Miller, A. K. & others.
- 1020.—Zahálka, B. Les terrains crétacés de la coupe Josefov-Skalička. [Russ. rés. p. 286, Fr. rés. p. 288. Věstník Stát. Geol. Úst. Československé Rep. 24 1949 pp. 265-290 pls. i, ii.
- 1021.—Zapfe, H. Fossilfunde im Rettenbachkalk bei hekl, Oberösterreich. Anz. Akad. Wiss. Wien 1949 86 pp. 251-256.
- Zatzepin, Y. I. vide Filatova, Z. A.
- 1022.—Zbyszewski, G. Etude géologique de la région d'Almeirim. Comm. Serv. geol. Portugal 28 1947 pp. 217-263 diagrams, pls. i-vii, map.
- 1023.—Zilch, A. Studien Paul Ehrmann's über asiatische und südamerikanische Clausiliden. 1. Zur Kenntnis der Arten von *Paraphaedusa* O. Boettger. 2. Über einiger südamerikanische Neniinae. Arch. Molluskenk. Frankfurt a.M. 1949 78 1/3 pp. 69-97 pls. 4-6.
- 1024.—Zilch, A. Nomenklatorische Bemerkungen. [Wenz namems Handb. Paläozool.] Archiv f. Mollusk. 78 1/3 1949 p. 101.

1025.—Zoch, W. Die stammesgeschichtliche Gestaltung der Doggerbelemniten Schwalens und ein Vergleich mit Lias und Kreidebelemniten. N. Jahrb. Min. Geol. Paläont. Stuttgart **B83** 3 1940 pp. 479–510 pls. xiii–xixa.

1026.—Zolezzi, G. Contributo allo studio dell'Alimentazione du Cefalopodi: *Loligo vulgaris* Lam. Boll. Pesca Piscicult. Idrobiol. Roma **16** 4 1940 pp. 131–135.

1027.—Zolezzi, G. La Pesca nella Provincia di Venezia. Boll. Pesca Piscicult. Idrobiol. Roma **22** 1 N.S. 2 1946 pp. 155–231.

1028.—Zuk, P. *Achatina fulica* (Fér.). An interesting interception from the Philippines. Mus. Art Notes, Vancouver, B.C. (2) **1** 1 1949 pp. 34–35.

ORTON **656**; *Vampyroteuthis infernalis* Chun, G. E. PICKFORD **704**; The land and freshwater Mollusca of Puerto Rico, H. V. DER SCHALIE **805**; Revision of "Belemnite" fauna, E. SCHWEGLER **831**; The mollusca of the Inland Sea of Japan, I. TAKI **888**; Revision of Viviparidae, TCKARY-SI & C. Y. TSI **896**; Handbuch der Paläozoologie Gastropoda-Prosobranchia, W. WENZ **974**; Cretaceous freshwater Mollusca of North America—a review, T. C. YEN **1012**.

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Cambrian.—Nautiloidea from the Upper Cambrian at Angara, Russia, K. B. KORDE 468; Paleocology of the Cambrian, Montana and Wyoming, G. LOCHMAN 542; Lower Cambrian Gastropods in Vermont, P. TANSCH 891.

Where more than one page is given in a reference, the one in roman type is where a new name is first mentioned and the one in *italic* is where the gen. sp. or var. is actually described.

Aplacophora

Anamenia heathi sp. nov. Atlantic Azores, Gorringer Bank, E. LELOUP Bull. Mus. Hist. nat. Belg. 23 26 pp. 1-11 figs.

Chaetoderma akkesiensis sp. nov. 30 fms. Akkeshi Bay, Japan, S. OKUDA Annot. zool. jap. 22 1943 p. 12 figs.

Eutonomenia atlantica gen. et sp. nov. near Teneriff, E. LELOUP Bull. Mus. Hist. nat. Belg. 24 37 1948 p. 1 figs.

Epimenia ohshimai sp. nov. Tomioka, Amakusa, Japan, K. BABA Venus 10 1940 p. 91 f. 1 A.D.

Meromenia hironellei Solenogaster gen. et sp. nov. G. of Gascoyne, E. LELOUP Bull. Inst. a Sci. nat. Belgique 25 1 1949.

Micromenia simplex gen. et sp. nov. Arctic 76° 20' N. lat., 25° 27' 15" E. long., E. LELOUP Bull. Mus. Hist. nat. Belg. 24 18 1948 p. 1 figs.

Paragymnomenia richardi gen. et sp. nov. near Cape Martin, Mediterranean, E. LELOUP Bull. Mus. Hist. nat. Belg. 23 35 1947 pp. 1-11 text-figs.

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Polyplacophora, morphology of the blood, L. ARVY & M. GABE 33; Cytology and Histology of the digestive tube, M. GABE & M. PRENANT 285; Ovogenesis, M. GABE & M. PRENANT 288.

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Lepidopleurus cinereus ovogenesis, figs., M. GABE & M. PRENANT 288.

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Acanthochites fascicularis, M. GABE & M. PRENANT 284; *Acanthochites fascicularis* ovogenesis, figs., M. GABE & M. PRENANT 288; *Acanthochites fascicularis* (L.) Alkaline phosphatases, figs., M. GABE & M. PRENANT 290.

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Ischnochiton winckworthi Leloup 1936—anatomy, figs., E. LELOUP 530.

III.—SYSTEMATIC INDEX

N.B.—FULL REFERENCES ARE GIVEN ONLY IN THE CASE OF A NEW GENUS, SPECIES OR VARIETY. IN OTHER CASES THE NUMBER IN "Large Bold Clarendon" REFERS TO THE LIST OF TITLES WHERE THE FULL REFERENCE WILL BE FOUND. WHERE THE REFERENCE IS GIVEN IN THE SYSTEMATIC PART, THE VOLUME NUMBER IS PRINTED IN Smaller Clarendon.

Note.—The arrangement here used follows in general that of Thiele's Handbuch. The most important differences are that Epitonacea and Pyramidellacea are placed immediately preceding Muriacea in order of grouping and the families Triviidae and Eratoidae are placed in Lamellariacea.

Gastropoda

Gastropoda—the radulae of some Japanese species, figs., T. HABE 333; Gastropoda—On the production of the Radula, A. PRUVOT-FOL 724; Gastropoda fossils from the Miocene of Dominica, R. RAMIREZ 734.

STREPTONEURA

ASPIDOBRANCHIATA

RHIPIDOGLOSSA

HALIOTIDACEA

Cheilotomona nom. nov. for *Cheilotoma* Koken 1889 non Dejean 1835, STRAND Arch. Naturg. 92A 1938 (8); 68, side strain, W. WENZ Handb. Paläozool. Gastr. 1; 162 et A. ZILCH Archiv. f. Molluskenk. 78 1/3 1949; 101.

†*Discocirrus crispus* p. 121 pl. ix f. 20, 21; *D. armatus* p. 121 pl. ix f. 22-28: spp. nov. Lias Diebel Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948.

†*Discohelix (Colpomphalus) splendens* sp. nov. Lias Djebel Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948. p. 118 pl. ix f. 15-17 text-fig. 44 (p. 115).

†*Emarginula rhaetica* sp. nov. Rhaetic, Lombardy, C. CHIESA Riv. ital. Paleont. Milan 55 1 1949 p. 31 pl. iii f. 15-16.

Fissurella fertilization, F. G. v. MEDEN 596.

Haliotidae—ecological observations and notes on world distribution, A. SORENSSEN 854.

Haliotis cracherodii Leach and var. *californiensis* Schultz—Identity of shell pigment (Indigotin ?), A. COMFORT 176; *H.*—fertilization, F. G. v. MEDEN 596; *H. tuberculata* L. anatomy, figs., E. v. SKRAMLIK 850; *H. cracherodii* colour principal 'haliotivioline', R. TIXIER & E. LEDERER 917.

†*Mastigospira* gen. nov. Euomphalidae genotype *Hyolithes alatus* Whiteaves, Middle Devonian, Dawson Bay, Lake Winnipegosis, Manitoba, Canada, A. LA ROQUE Contr. Mus. Pal. Univ. Michigan Ann. Abor 7 7 1949 pp. 113 114 pl. i f. 1, 3, 4.

Megathura crenulata experiments on the properties of Fertilization and related substances of eggs and sperm, A. TYLER 925.

†*Peruwispira* gen. nov. p. 146 Pleurotomariidae genotype *P. delicata* sp. nov. p. 147 pl. 28 f. 9-12 Lower Peruvian, Peru, B. J. CHRONIC in Newell, Chronic & Roberts "Upper Paleozoic of Peru" 1949.

Puncturella dorcas sp. nov. off Toda, 100 fms., Japan, T. KINA & T. HABE Jap. J. Malac. 15 5 1949 p. 87 fig. 2.

Prosobranchiata

Docoglossa

PATELLACEA

Acmaea langfordi sp. nov. Chikura, Japan, J. S. SCHWENGEL Nautilus Philad. 1949 62 3 p. 97 pl. 6 f. 1, 1a c.

Nacella (Patinigera) kerguelensis E. A. Smith, N. (P.) *polaris* Hombron & Jacquinot, N. (P.) *polaris concinna* Strebel, figures, A. CARCELLES 135.

Notoacmaea fuscoviridis sp. nov. Satsuma, Japan, M. TERAMACHI Jap. J. Malac. 15 5/8 1949 p. 90.

Patella coerulea L. sex reversal and seasonal gonadial changes, tables & figs., G. BACCI 46; observations on G. BACCI 47; *Patella*, C. DONS 215; *P. lusitanica*. *coerulea* "may be easily separ[at]ed on the basis of their metric characters." distribution and station at Blanes, N.E. Spain, M. DURAN & M. MASSUTI 226; *Patella* observations of the biology. N. S. JONES 420; *P. sanguinans* Reeve a synonym of *P. miniata* Born, H. J. KOCH 460; *P. oblecta* Krauss is a juvenile form of *P. barbara*, H. J. KOCH 460; *Patella* fertilization, F. G. v. MEDEN 596; *P. coerulea* sex proportions, tables, O. PELLEGRINI 686; *Patella* alimentation, J. VASSEROL-STOEFFER 928.

Patina pellucida varieties, A. GRAHAM.

Pectinodonta rhyssa Dall. notes and fig. of radula, T. HABE 339.

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Alcyona acia sp. nov. Rottneid Id., W. Australia, B. C. COTTON "bicarinata and more strongly sculptured than *A. australis* Hedley 1907 from MastHd. Id. 17-20 fms." Trans. roy. Soc. S. Aust. 1948 72 1 p. 31 pl. i f. 7, 8.

†*Amphiscapha peruviana* sp. nov. Lower Peruvian, Peru, B. J. CHRONIC in Newell, Chronic & Roberts "Upper Paleozoic of Peru" 1949 p. 149 pl. 49 f. 1a-c.

†*Amphitrochilia* (*Aristerella*) *undata* subgen. et sp. nov. p. 128 pl. x f. 12; *A. (Aristerella?) rorata* p. 129 pl. x f. 13-15: sp. nov. Domesian Diebel, Bou-Dahar, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948.

†*Aristerella* subgen. nov. of *Amphitrochilia* with *undata* sp. nov. Lias Diebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948 p. 128 pl. x f. 12.

Astraea japonica distribution and water temperature, R. TIBA 913; *A. ruthi* sp. nov. Barbados, B.W.I., A. H. VERRILL Mollusca Tavares 2 3 1949 p. 70. plate.

Austroliotia gen. nov. genotype *Liotia botanica* Hedley 1915 New South Wales, B. C. COTTON Trans. roy. Soc. S. Aust. 1948 72 1 p. 31.

†*Callionophalus ilsae* sp. nov. Monti Promina, Dalmatia, Eocene, O. KÜHN Jahrb. geol. Bundes Anst. Wien 91 1-2 1948 p. 71 pl. 2 f. 7-8.

Calliostoma (*Otukaia*) *hajimeanum* sp. nov. off Kii coast, 100 fms., Japan, H. YOSHIDA Jap. J. Malac. 15 1-4 1948 pp. 33, 34 text-figs. 1-3; *C. a* catalogue of Japanese species, N. IUEBE 388.

†*Calliostoma dubertreti* sp. nov. Meso-zoic, Lebanon, G. DELPEY. Notes Mem. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 58 text fig. 35 pl. xi f. 13; *C. leointreae* sp. nov. middle Miocene, Loire basin, M. GLIBERT Mem. Mus. Hist. nat. Belge (2) fasc. 30 1949 p. 43 p. ii f. 5. *C. orbignyanus praeformis*, *C. o. gracilistea*, *C. conitesta*, *C. podolicoformis nudostriata*, *C. p. paucistriata*, *C. p. harthergensis*, *C. p. wiesensis* "spp. and n. spp." [nomen nud. here], A. PAPP 673.

Circulus striatus (Philippi) figured, L. A. W. C. VENMANS 937.

†*Circulus striatus turoniensis* nov. forma Middle Miocene, Loire basin, M. GLIBERT Mém. Mus. Hist. Nat. Belg. (2) fasc. 30 1949 p. 70 pl. iv f. 5; *C. quadricristatus* sp. nov. Middle Miocene, Republic of Dominica, G. G. AGUAYO Rev. Soc. Malac. Habana 1949 6 3 p. 91 pl. 4 f. 1-3.

†*Circulopsis dautzenbergi* sp. nov. Middle Miocene, Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 p. 71 pl. v f. 2.

†"*Crossostoma*" *atlantis* sp. nov. Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948 p. 123 pl. ix f. 30, 31.

†*Delphinulopsis marianii* sp. nov. Rhaetic, Lombardy, C. CHIARA Riv. ital. paleont. Milan 55 1 1949 p. 31 pl. iii f. 17, 18.

Gibbula umbilicaris chiefly "in places exposed to the beating of the waves" at Blanes, N.E. Spain, M. DURAN & M. MASSUTI 226.

†*Gibbula angulata spirocarinata* 'n. sp.' [nom. nud. here], A. PAPP 673.

Iulubinus err. pro *Jujubinus*, G. RUGGERI Giorn. Geol. Bologna 3 20 1948 p. 58.

Marmarostoma of Formosa, S. KURODA 489.

Modelia sp. nov. fig., Cretaceous Belgrade, B. MILOWANVIC 618.

†*Monodonta (Oxystele) amedei turoniensis* nov. forma = *Trochus patulus* Dujardin 1837 non Brocchi, M. GLIBERT Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 p. 63 pl. iii f. 10.

†*Monodontella geometrica* sp. nov. Cretaceous, Vigny, France, A. CHAVAN C.R. Séances Soc. géol. Fr. Paris 6 1949 p. 104 f. 3.

†*Perrinia stammi* sp. nov. Neogene Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 16 pl. 1 f. 1a-c.

Orthonychia pajerensis sp. nov. Lower Permian, Peru, B. J. CHRONIC in Newell, Chronic & Roberts 'Upper Paleozoic of Peru' 1949 p. 153 pl. 28 f. 6a-9b.

†*Pachydontella* genotype *etiampicta* gen. et sp. nov. Pliocene, Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6 27, 28 pl. 6 f. 1, 6.

†*Proconulus spinatus* sp. nov. Lias Djebel, Bou-Dakar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948 p. 126 pl. x f. 7-9.

Solariella s.l.—a review of Japanese species, K. OYAMA 667.

†*Solariella bekfayensis* sp. nov. Meso-zoic, Lebanon, G. DELPEY Notes & Mém. Haut-Comm. Republ. Franc. Syrie et Au Liban 3 1940 p. 52 text-fig. 30 pl. vi f. 11.

†*Tectus* (*Dimorphotectus*) *chouberti* sp. nov. Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948 p. 126 pl. x f. 4-6 text-fig. 45 (p. 115).

Trochus sacellus and its allies [in Japanese], T. KURODA 494.

†*Trochus papilla major* "n. sp." [var. nov.] Gore, F. ŠKULJE Prirod. Istraž. mat. prir. Razred. 4 1919 p. 34.

Tugali gigas (Marts), *T. vadososinuata* Yokoyama, Conchometry tables and graphs, R. TIBA 915.

Turbo operculum fig., B. HUBENDICK 381.

†*Turbo* (*Lunella*) *ozawai* sp. nov. Miocene, Tyugoku, Japan, Y. OTUKA J. Soc. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 pp. 22 36 p. iii f. 22-24.

†*Zethalia coronata* sp. nov. Pliocene, Waikua River Pliocene, N.Z., J. MARWICK. Palaeont. Bull. N.Z. 16 1948 p. 28 pl. 6 f. 4, 5, 8.

NERITACEA

†*Cornulites hindtei* sp. nov. Lower Devonian, Coblenz, G. DAHMER Senckenb. Frankfurt 29 1-6 p. 133 f. 13.

Helicina (*Helicina*) *stolii* sp. nov. Rio Branco de Obidos Para, Brazil, F. HAAS Archiv. f. Malak. 78 4/6 1949 pl. 7 f. 4; *H. (H.) weyrauchi* sp. nov. Jaén Depmt. of Cajamarca, Peru, F. HAAS Fieldiana Zool. Chicago 31 23 p. 192 fig. 40; *H. acobambensis* Acobambita N. of Tarma, Peru at 3,900 metres p. 100; *H. chionea* Mejorada, near Huancayo, Peru at 2,600 metres p. 101; *H. huancapistana* Huancapistana, Peru at 1,800 metres p. 101: spp. nov., H. A. PILSBRY Nautilus Philad. 1949 62 3.

†*Nerita* (*Desmieria*) *zumoffeni* sp. nov. Mesozoic, Lebanon, G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 41 text-fig. 17-19 pl. vi f. 7-8.

†*Neritaria subincisa* Kittl. from the Trias, Montenegro, fig., Z. BEŠIĆ 78.

Neritina fluvialis L. development in brackish and freshwater, P. BONDESON 105.

†*Pilcolus gollmeri* sp. nov. Mesozoic, Lebanon, G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 43 text-fig. 20-22 pl. iv f. 17.

Theodoxus ihurialis [sic] (L.) *fluvialis* (L.) figs. shell structure and pattern, K. BECKER 62.

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Cocculina japonica uncinata subsp. nov. pp. 58, 62, pl. 3 f. 8; *C. nipponica* pp. 59, 62 f. 1; *C. pacifica* pp. 59, 63 f. 5; *C. punctoradiata* pp. 59, 64 f. 7-9; *C. tosaensis* pp. 60, 64 pl. 3 f. 4; *C. scabra* pp. 60, 66 pl. 3 f. 3; *C. teramachii* pp. 60, 65 pl. 3 f. 6: spp. nov. seas of Japan, KURODA & HABE Jap. J. Malac. 15 5/8 1949.

CYCLOPHORACEA

Ampullaria notes on alimentation, figs., A. S. ALONSO & Z. A. DE CASTELLANOS 19.

†*Ampullella hewitti* sp. nov. Eocene, California, HANNA & HERTLEIN J. Paleont. Menaska Wis. 23 4 1949 p. 393, pl. 77 f. 1, 4 text-fig. 2.

Chamalycaeus (*Signacharex*) *itonis* subgen. et sp. nov. Kami-iti-mura, Bittiyū, Okayama, Prefecture Japan, T. KURODA Jap. J. Malac. 13 1-40 1943 pp. 8, 10 text-figs. 1-4; *C. kurodai duplicatus* subsp. nov. Reisui, Lenran-dō, S. coast of Tyōsen (Korea), T. KURODA & M. MIYANAGA Venus Murkaisima 12 3/4 1943 pp. 130-136 text-fig. 4.

Cipangocharax subgen. nov. of *Chamalycaeus* subgenotype *Alycaeus biezcisus* Pilsbry, T. KURODA Jap. J. Malac. 13 1-4 1943 pp. 9-11.

Cipangopaludina miryagii sp. nov. figd. in Venus 9 (1) p. 47 text-fig. in ponds in Takao Prefecture, Southern Taiwan, T. KURODA Venus 10 3/4 p. 129.

Cyclotus umbraticus sp. nov. Maxwell's Hill, 700 ft. Malaya W. G. S. B. JUTTING Bull. Raffles Mus. Singapore 19 1949 p. 54 pl. 1 f. 1.

Diplommattina (*Benigoma*) *oyamai* sp. nov. Mt. Amagi, Izu-peninsula, Sizuopaken Honsyū Japan, T. HABE (Venus) = Jap. J. Malac. 13 1-4 1943 pp. 77-78 f. 1; *D. bicoronata* sp. nov. E. v. MARTENS Sitz.-Ber. Nateuf. Freunde Berlin 1884 p. 199; *D. streptophora* Kramat Pulau, Perak type in Brit. Mus. p. 205 fig. 2e; *D. pentaekma* Gua Musang, Kelantan type in Brit. Mus. p. 207 fig. 3a-b; *D. demorgani* Kota Gehanggi, Pahang p. 207 fig. 3c; *B. maduana* Gera Madu, Kelantan p. 209 f. 3d; *D.*

attenuata Gua Bama, Pahang p. 210 f. 4c; *D. parabates* Senggong, Perak p. 211 f. 4b; *D. acme* Kaki Bukits, Perlis p. 212 f. 4b; *D. tweediei* Gua Musang Kelantan p. 213 f. 4e; **spp. nov.** types to be deposited in British Museum; *D. superba brevior* **subsp. nov.** Sungei Siput, Perak type in Brit. Mus. p. 210 f. 3e; *Diplommantina* of Malaya, F. F. LAIDLAW Bull. Raffles Mus. Singapore 19 1949; *D. (Sinica) kyobuntoensis*, Kyobunto, Korean Archipelago, T. KURODA & M. MIYANAGA Venus Mukaivima 12 3-4 1943 pp. 123-127 text-fig. 3.

Fijiopoma **gen. nov.** genotype *Ostodes liberatus* Garrett, W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 23 f. 11.

Hargravesia richardsi **sp. nov.** Solomon Ids. N. coast of Guadalcanal Is., W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 47 f. 27.

Kanapa **gen. nov.** Pupinidae genotype *Registoma brazieri* Crosse., W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 pp. 41-42 f. 24a; *K. manni* **sp. nov.** Solomon Ids. Three Sisters Ids., W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 42 f. 23a-24b, c.

Margarya monodi Dantz & Fischer = *M. melanoides monodi* D. & F.) considered a species p. 9 pl. 1 f. 7-8; *M. elongata* **sp. nov.** W. shores of Kunming Lake p. 11 pl. ii f. 13-14; *M. e. yini* **var. nov.** p. 12 pl. ii f. 15-16 Kunming Lake; *M. yangtsunghaiensis* **sp. nov.** from the bottom of Yang-trun-hai p. 16 pl. ii f. 19-23 text-fig. 4; *M. mansuyi* Dantz & Fischer (= *M. melanoides mansuyi* D. & F.) considered of specific rank p. 19 pl. iii f. 23-28 text-fig. 5; *M. mansuyi bicostata* **var. nov.** Fu-hsien Lake p. 22 pl. iii f. 29-32; TCHANG-SI & C-Y TSI Contr. Inst. zool. Peiping 5 1 1949.

Ostodes cookei **sp. nov.** Upolu Is. p. 10 f. 3a; *O. savaii* **sp. nov.** Savaii Is. Salailua p. 14 f. 56 Samoan Is., W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949.

Pila speciosa (Phil.) distribution T. PAIN 670.

Pomacea castelloi (Sowerby) p. 1 f. 1, 2. *P. castelloi pertusa* (Sowerby) pl. 1 f. 3,

4; *P. granulosa* (Sowerby) pl. 2 f. 5, 6, these figures are of the types of the three shells, T. PAIN 671; *P. canaliculata chaquensis* **subsp. nov.** Maorejón de Ingeniero Juárez. Chaco salteño Formosa, M. I. H. SCOTT Acta zool. Lillo Tucuman 6 1948 p. 242.

Pupina (*Pupina*) *huntingtoni* **sp. nov.** Solomon Ids. northern coast of Guadalcanal Ids. p. 33 f. 19, W. J. CLENCH, Bull. Bishop Honolulu 196 1949.

Pupinesia **gen. nov.** genotype *Pupina adamsiana* Crosse, W. J. CLENCH, Bull. Bishop Mus. Honolulu 196 1949 p. 39 f. 22.

Pupinoa **gen. nov.** Genotype *Pupina aurea* Hinds, W. J. CLENCH, Bull. Bishop Mus. Honolulu 196 1949 p. 37 f. 21a; *P. lousiadiensis* **sp. nov.** Lousiade Ids., W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 38.

Rhiostoma tomlini **sp. nov.** Khao Sabap, Siam, A. E. SALISBURY Proc. Malac. Soc. London 1949 23 1 p. 41 pl. 3 B f. 3, 4.

Signacharex **subgen. nov.** of *Chamaelycaeus* subgenotype *C. (S.) itonis* **sp. nov.** Okayama Japan, T. KURODA Jap. J. Malac. 13 1-4 1943 pp. 8-10 text-figs. 1-4.

Tylotoechus cookei **sp. nov.** Solomons, Malaita Is. Auki, W. J. CLENCH Bull. Bishop Mus. Honolulu 196 p. 44 f. 25.

Viviparus lapillus, *V. heudei*, *V. histicus*, *V. aeruginosa*, *V. reevei* figs., I. TAKI 884; *V. viviparus operculum* formation figs., B. HUBENDICK 381; *Viviparus radulae* figs., B. VERDCOURT 945, 946.

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Valvata radulae figs., B. VERDCOURT 947;

† *Valvata* (*Valvata*) *exotica*, *V. (Turri-valvata) sarmatica*, 'n. spp.' [nomm. nud. here], A. PAPP 673.

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Acme fusca near Doncaster, A. S. COOK 179.

Annularella holguinensis? *alcaldei* "spec. nov." [**subsp. nov.**] Cueva del Rio Libisa Mayari Oriente Cuba, C. G. AGUAYO & M. S. ROIG Rev. Soc. Malac. Habana 7 1 1949 10 pl. 2 f. 3, 4.

Cyclostoma Notes on palaearctic species, J. PICARD 702.

Dumasella Cossmann a superfluous name, J. MORRELLET 633.

Echininus Clench & Abbott 1942 (Johnsonia 4 : 3) **nom. nov.** for *Nina* J. E. Gray 1850 non Horsfield 1829, W. WENZ Handb. Paläozool. Gast. Bd. 1 : 524 vide etiam A. ZILCH Arch. J. Mollusk. 78 1/3 1949 : 101.

Gassiesea **gen. nov.** genotype *Cyclostoma artense* Montrouz New Caledonia, W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 5 f. 1.

†*Hesperidina* **gen. nov.** Purpurinidae [sole sp.] *striolata* **sp. nov.** Lias Bou-Dahar. Notes Mem. Serv. Mines Carte Geol. Maroc. 68 1948 p. 95 pl. vii f. 9, 10.

Kondorhapse **gen. nov.** genotype *Kondorhapse kiyokoe* **sp. nov.** Truk Ids., Dublon Id. Mt. Tolowan, W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 28 f. 16.

Littorina neritoides found chiefly in places exposed to waves at Blanes N.E. Spain, M. DURAN & M. MASSUTI 226 ; *L. obtusata* geographical variation in the North Atlantic, J. KNUDSEN 461 ; *L. pintado* Wood, of Hawaii eggs and larval stages figs., J. M. OSTERGAARD 658.

Melarhapse, vitality of, J. KURODA 490.

Opisthosiphon (*Bermudezsiphona*) *conicus* **sp. nov.** El Peñón S.E. of Chambas Camagüey Cuba, C. G. AGUAYO & M. S. ROIG Rev. Soc. Malac. Habaria 7 1 1949 7 pl. 2 f. 1 ; *O. sainzi insolatus* Loma Leal, Los Haticos, Holquin, Cuba p. 89 f. 1 ; *O. caroli augusti* **subsp. nov.** Finca Flores cerea del Mix Holguins, Cuba, CLENCH & AGUAYO Rev. Soc. Malac. Cuba 6 3 1949 6 p. 90 f. 1, 2.

Paramia **gen. nov.** genotype *Cyclostoma incisa* Hombron & Jacquinot, W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 25 f. 13 ; *P. kondoi* **sp. nov.** Moen Id., Nebokos, Caroline Ids., W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 27 f. 15a, 28b.

Pomatias radula fig., B. VERDCOURT 948.

†*Purpurina rudis* p. 92 pl. vii f. 1, 2 ; *P. moghrabiensis* p. 93 pl. vi f. 17, 18 ; *P. berberica* p. 94 pl. vii f. 6-8 **spp. nov.** Lias Djebel Bou-Dahar Morocco, G. DUBAE Notes et Mém. Serv. Mines Carte geol. Maroc. 68 1948.

Tectarius, vitality of, J. KURODA 490.

Tropidophora **err** pro *Tropidophora*, E. FISCHER-PIETTE 258.

Tropidophora thesauri p. 13 **nom. nov.** for *Cyclostoma desmoulinii* Sow. (non. Grat) = *C. moulinii* Rve. ; *T. humberti* p. 14 pl. 1 f. 1-3 ; *T. chavani* p. 15 pl. 1 f. 4-6 ; *T. petite* p. 26 pl. ii f. 17-19 ; *T. filopura* p. 30 pl. ii f. 23-27 ; *T. denisi* p. 34 pl. iii f. 34-36 ; *T. reesi* p. 39 pl. ii p. 29-31 **spp. nov.** Madagascar E. FISCHER-PIETTE J. de Conchyliol. Paris 89 1 1949 ; *T. tricarinata subdygana* p. 45 pl. iii f. 42-43 ; *tricarinata secans* p. 48 p. iii f. 44-45 ; *tricarinata lesagei* p. 53 pl. iv f. 55-57 ; *tricarinata chenui* p. 56 pl. v f. 60-61 ; *tricarinata roquignyi* p. 57 pl. v f. 64-65 ; *tricarinata leucotropis* p. 58 pl. v f. 66-69 ; **vars. nov.** Madagascar, E. FISCHER-PIETTE Jour. de Conchyliol. Paris 99 2 1949 ; *T. milloti* p. 111 pl. v f. 70-72 ; *T. bathiei* p. 113 pl. v f. 73-75 ; *T. morondavensis* p. 114 pl. v f. 76-78 ; *T. diegoensis* p. 118 pl. v f. 79-81 ; *T. besalampiensis* p. 119 pl. vi f. 82-84 ; *T. tulearensis* p. 120 pl. vi f. 85-87 ; *T. vignalii* p. 121 pl. vi f. 88-90 ; *T. winckworthi* p. 126 p. vii f. 100-102 ; *T. bemaraensis* p. 129 pl. vii f. 103-105 ; *T. tomini* p. 131 pl. vii f. 106-108 ; **spp. nov.** ; *T. stumpfii sambiranoensis* p. 124 **var. nov.** *Tropidophora* of Madagascar, E. FISCHER-PIETTE Jour. de Conchyliol. Paris 89 3 1949.

Tropidophora of Madagascar. Iconography and Classification of the species of this island, E. FISCHER-PIETTE & J. MILLOT 263.

Wrightudora (*Aguaystudora*) *laevistria* **sp. nov.** El Peñón S.E. of Chambas, Camagüey, Cuba, C. G. AGUAYO & M. S. ROIG Rev. Soc. Malac. Habana 7 1 1949 8 pl. 2 f. 2.

RISSEOACEA

†*Alvania* (*Massotia*) *zizyphina* Dollfus, A. (*Alvania*) *curta* Dujard., A. (*A.*) *oceanii* Orb., A. (*A.*) *cimicoides* Forbes, A. (*A.*) *reticulata* Mont., A. (*A.*) *venüs* Orb., A. (*A.*) *punctura*

Mont., A. (*A.*) *cancellata* da C., A. (*Taramellia*) *zelandica* Mont. A. (*Manzonina*) *costata* Ad. in the Redonian France, P. CALAS 131. *Alvania* (*Arsenia*) *spiralis* sp. nov. Middle Miocene Loire basin (Dollfus & Dautz nom. nud. 1886 Rissoa (*Alvania*) *spiralis*), M. GLIBERT Mém. Mus. Hist. nat. Belge. (2) fasc. 30 1949 p. 107 pl. vi f. 4; A. (*Massotia*) *lactanea* (nom. nud. D. & Dautz 1886) sp. nov. Middle Miocene Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belge. (2) fasc. 30 1949 p. 108 pl. vii f. 10; A. (*Arsenia*) *dautzenbergi* sp. nov. Middle Miocene Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belge. (2) fasc. 30 1949 p. 105 pl. vi f. 9; A. (*Alvania*) *venus robusta*; A. (*Taramellia*) *zelandica pluricosta* vars. nov. p. 168 Saint-Clément-de-la-Place, France, Redonian, P. CALAS Bull. Mus. Hist. nat. Paris (2) 21 1 1947; A. *herae-laciniae* sp. nov. Pliocene Italy nom. nud., G. RUGGIERI 785.

Amnicola miyadai sp. nov. Kurile Island, T. HABE Venus Mukaisima 12 1-2 1942 p. 26 f. 1-2; *Amnicola radula* figs., B. VERDCOURT 943.

Assimineae (*Pseudomphala*) *latericea miyazakii* subsp. nov. p. 97; A. (*Assimineae*) *liaotungensis* nom. var. for "A. *latericea* Habe Venus 12 1/2 1942 [not '43 as quoted] pp. 38-39 pl. 1 f. 3, pl. 3 f. 4 non H. & A. Ad. misprinted *latericera*" p. 98, T. HABE (Venus) Jap. J. Malac. 13 1-4 1943.

Assimineidae Classification of Japanese species, T. HABE 330; A. a revised list of Japanese species with key, T. HABE 338; *Assimineidae* Notes and corrections on Japanese species, T. HABE 333.

Assiminopsis sect. nov. of *Assimineae* for *hayasii* sp. nov. Japan, T. HABE Venus Mukaisima 12 1-2 1942 p. 44 pl. 1 bis f. 9 pl. 2 f. 6 pl. 3 f. 8.

Bithynia radulae, figs., B. VERDCOURT 944; *B. tentaculata* operculum formation, figs., B. HUBENICK 381; *B. tentaculata* parasites, W. NEWHAM 643.

Bythinella from the Côte d'Or, C. R. BOETTGER 96; *B. viridis* Poiret, *B. abbreviata* Michaud, *B. pupoides* Paladilhe in E. France, figs., C. R. BOETTGER 96.

†*Caspia* (*Caspia*) *graciliformis*, C. (*C.*) *microtesta* 'n. spp.' [nomm. nud. here], A. PAPP 673.

Cavernacmella subgen. nov. of *Paludinella*, *kuwuensis* Susaki, Tuizi, T. HABE Venus Mukaisima 12 1-2 1942 p. 28 f. 172.

†*Cingula miocenica* Pruvot in the Redonian Anjou and Brittany, P. CALAS 131; *C. (Onoba) dautzenbergi* sp. nov. Middle Miocene, Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belge (2) fasc. 30 1949 p. 101 pl. v f. 21; *C. turoniensis* sp. nov. Middle Miocene, Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 p. 98 pl. v f. 18.

Dublonia gen. nov. genotype *Dublonia brazieri* sp. nov. Truk Isds., Dublon Is., Carolines, halfway up Mt. Tolowan, W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 pp. 7, 8 f. 2.

Gonatorhaphe lauensis sp. nov. near and S. of Marona, Mango, Lan, Fijian Is., W. J. CLENCH Bull. Bishop Mus. Honolulu 196 1949 p. 23 f. 10.

Hydrobia radula, figs., B. VERDCOURT 941; *H. (Potamopyrgus) jenkinsi* Smith in Denmark, and variation, figs., P. BONDESEN & E. W. KAISER 106; *H. (P.) jenkinsi* Smith in Denmark and its ecology and Danish records, P. BONDESEN & E. W. KAISER 107.

Hydrobiidae—hermaphroditism, figs., J. JOHANSEN 417.

Jokajia subgen. nov. of *Thaanumella* subgen. type *T. (J.) cookei* sp. nov. Caroline Is., Ponape, base of Peipalap Peak, Jokaj Islet, W. J. CLENCH Occ. Pprs. B. P. Bish. Mus. Honolulu 18 13 1946 p. 204 text-fig. 4.

Katayama hupensis, fig., J. TAKI 884.

Omalogyra, structural differences in winter and summer forms, V. M. FRETTER 277; *O.*, seasonal variation, V. M. FRETTER 277.

Omphalotropis cookei sp. nov. Marpi Cliffs, Saipan Island, Marianas, R. J. ABBOTT Occ. Pprs. Bishop Mus. Honolulu 19 15 1949 p. 263 fig. 1 a-e; *O. quadrasi* Mlldff, cotype figured, R. T. ABBOTT 8.

Oncomelania quadrasi experiments on the control of Schistosomiasis, D. B. McMULLEN & J. W. INCALLS 565; *O. nosophora* and *Schistosoma japonica*, seasonal studies, D. P. McMULLEN & OTHERS 564; *O. lii*, fig., J. TAKI 884.

Paludineella conica fig. of cotype, *P. c. saipanensis* **subsp. nov.** Grove 6.8 m. 358° from Kagwan Pt. and 85 from Maniagassa Id. N. end of Saipan, Marianas, R. T. ABBOTT Occ. Pprs. Bishop Mus. Honolulu 19 15 1949 p. 271; *P. minima* (Pils, MS.) **sp. nov.** Japan, T. HABE Venus Mukaisima 12 1-2 1942 p. 52 pl. 1 bis. f. 16 pl. 2 f. 11 pl. 3 f. 3.

Ponapella **gen. nov.** Thaanumellinae **subfam. nov.** (*Diadema*) genotype *P. pihapika* **sp. nov.** Caroline Islands, Ponape, Mr. Tolotona, W. J. CLENCH Occ. Ppts. Beatrice P. Bishop Mus. Honolulu xviii 13 1946 pp. 199, 200 text-figs.

Rissoa (*Rissostomia*) *paulae* **sp. nov.** Lago di Sabaudia (Paola), G. BRUNELLI & G. CANNICCI Boll. Pesca Piscicolt Idrobiol. Roma 16 4 1940 p. 46.

Rissoidae—hermaphroditism, figs., J. JOHANSSON 417.

Rissoina (*Schwartziella*) *chesneli* *mi-chaudi* **var. nov.** p. 198 pl. ix f. 5; *R. (S.) bouryi* **sp. nov.** p. 199 pl. ix f. 8; *R. (S.) fischeri* **sp. nov.** p. 199 pl. ix f. 6; Cuba, M. DESJARDIN Jour. de Conchyliol. Paris 89 4 1949.

†*Rissoina bruguierei* PAYR. in the Redonian, France, P. CALAS 131.

Siotiella **gen. nov.** Hydrobiidae ? genotype *S. effusa* **sp. nov.** Rio Tapajoz at Belterra, Pará, Brazil, F. HAAS An. Inst. Biol. Mexico 1949 20 pp. 308-309 f. 1, 2.

Syncera nitida guamensis **subsp. nov.** Banks of Pago River, Guam Id., Marianas, on most logs, etc., not far from the ocean, R. T. Abbott Bishop Mus. Honolulu 19 15 1949 p. 273 f. 8 a-c, 9 a-c.

Thaanumella **gen. nov.** (= *Diadema* Pease 1868 (in part) non *Diadema* Schum. 1817; *Garrettia* 'Pease' Paetal 1873 in part) type *Diadema carolinarum* Mildff. (= *Omphalotropis angulosa* Ancey), W. J. CLENCH Occ. Pprs. Bish. Mus. Honolulu 18 13 1946 p. 201 text-fig. 2; *T. cookei ponapensis* **subsp. nov.** Caroline Ids., Mt. Tolotoru south side of Ponape, W. J. CLENCH Occ. Pprs. B. P. Bish. Mus. Honolulu 18 13 1946 p. 205.

Tomlinella **subgen. nov.** of *Truncatella* s.-genotype *Truncatella scalaris* Michaud, W. J. CLENCH & R. D. TURNER Johnsonia 2 25 1948 p. 159 pls. 45 f. 2, 71 f. 1-6.

Truncatella bilabiata bahamensis Little Inagua Island p. 155 pl. 67 1-5; *T. scalaris piratica* St. George's Causeway, Bermuda p. 161 pl. 65 f. 1 pl. 72 f. 1-4; **subsp. nov.**, W. J. CLENCH & R. D. TURNER Johnsonia 2 25 1948; *T. valida* Pfr., *T. kirsiuensis* Pils, *T. k. japonica* Pils, Radulae, figs., T. HABE 328.

CERITHIACEA

†*Aphanoptyxis cossmanni* **sp. nov.** Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948 p. 54 pl. iii f. 9 a, b text-fig. 4 (p. 42).

†*Aptyxiella praevia* p. 52 pl. iii f. 4; *A. ? subgradata* p. 54 pl. iii f. 7, 8 **spp. nov.** Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Cartes Geol. Maroc 68 1948.

†*Architectonica ruteni* **sp. nov.** Neogene Dent Peninsula, British North Borneo, L. R. Cox Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 21 pl. 2 f. 1a, b.

Argyropeza izekiana **sp. nov.** off Toca, ca. 100 fms., Japan, T. KURODA Jap. J. Malac. 15 5, 8 1949 pp. 76-78 fig. 1.

†*Brachytrema ? despujolsi* **sp. nov.** Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948 p. 62 pl. iii f. 31-33.

†*Campanilopa dilloni* **sp. nov.** Eocene, California, HANNA & HERTLEIN J. Paleont. Menasha Wis. 23 4 1949 p. 393 pl. 77 f. 2, 4 text-fig. 1.

Cerithidea cingulatus (Gmel.) rate of growth, V. SADASIVAN 792.

†*Cerithidea* (*Cerithideopsis*) *tokunagai* **sp. nov.** Miocene, Tyūgoku, Japan. Y. OTAKA J. Fac. Sci. Jap. Univ. Tokyo Geol. 1938 5 1, 2 pp. 22 39 pl. iii f. 29.

†*Cerithiello* (*Fibula*) *bekfayensis* **sp. nov.** Mesozoic, Lebanon, G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 214 text-fig. 171; *C. africana* p. 1 lf. 16-18; *C. sarrazini* pl. 1 f. 19-21 text-fig. 5 **spp. nov.** Lias, Bou-Dahar, Morocco, G. DKBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 63 1948 p. 46.

†*Cerithinella termieri* p. 66 pl. iv. f. 3-7 text-fig. 15; *C. gratiosa* p. 69 pl. iv. f. 14, 15 text-fig. 17; *C. baccata* p. 70

pl. iv. f. 19-22 text-fig. 18; *C. gemmifera* p. 71 pl. iv f. 25-28 text-fig. 20; *C. margaritata* p. 72 pl. iv. f. 29-36 text-figs. 21-23; **spp. nov.** Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 II 1948.

†*Cerithiopsis* (*Cerithiopsis*) *dautzenbergi* **sp. nov.** Miocene, Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belge (2) fasc. 30 1949 p. 150 pl. x f. 2; *C. (Metaxia) turoniensis* **sp. nov.** Miocene, Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 p. 153 pl. x f. 6.

†*Cerithium orfellense* p. 114 f. 10; *C. sofegginense* p. 115 f. 11: **spp. nov.** Maestrichtian Basin of Sofeggin-Orfella, Lybia, C. BRICCHI Riv. ital. Paleont. Milano 55 3 1949; *C. ingens* **sp. nov.** Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 58 1948 p. 91 pl. vi f. 1 a, b; *C. (Ptychocerithium?) eymardi* (D. & D. MSS.) **sp. nov.** Miocene, Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belge. (2) fasc. 30 1949 p. 145 pl. ix f. 10.

Clava obeliscus (Brug.), of Hawaii eggs and larval stages, figs., J. M. ØSTERGAARD 658.

†*Clava (Proclava) reinhardi* **sp. nov.** Neogene, Dent Peninsula, British North Borneo, L. R. Cox Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 22 pl. 1 f. 7 a-c.

†*Cryptanulax angulodentatum* p. 77 pl. v f. 8, 9; *C. album* p. 79 pl. v f. 1-7 text-fig. 32: **spp. nov.** Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948.

Diala vitrea Sow. used as a fertilizer, TANZI & KANAMARU 890.

†*Erelissa pusilla* **sp. nov.** p. 80 pl. v f. 19, 20; *E. douxamii africana* **var. nov.** p. 80 pl. v f. 21-25 text-fig. 11 (p. 64); *E. spissa* **sp. nov.** p. 81 pl. v f. 26-28; *E. spissa capillata* **var. nov.** pl. v f. 29-30; *E. menchikoffi* p. 82 pl. v f. 31-35 text-fig. 12 (p. 64); *E. galenae* p. 83 pl. v f. 38-40 text-fig. 13 (p. 64): **spp. nov.** Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948.

†*Fibula afra* p. 47 pl. ii f. 1-3; *F. nicolai* p. 48 pl. ii f. 4-8 text-fig. 6: **spp. nov.** Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948.

Fibulella **nom. nov.** *Fibula* Piette 1859 non Leske 1778 type *C[eritella] (F.) undulosa* Piette "*[Fibula]*" [sed vide L. R. Cox & W. J. Arkell Mon. Pal. Soc. London Surv. Moll. Br. Great oolite ser: pt. 11 1950 p. 76], W. WENZ Handb. Paläozoologie 6 6 1 1940 p. 817.

†*Glauconia mariae medensis* p. 78 pl. 1 f. 32 text-fig. 3; *G. m. bruni* p. 79 pl. 1 f. 34, 35 text-fig.; *G. m. repelini* p. 79 pl. 1 f. 33 text-fig. 4; *G. m. ruysseni* p. 80 pl. 1 f. 36 text-fig. 6: **vars. nov.** Upper Cretaceous, Provence, France; *G. conoidea granosa* **var. nov.** Upper Cretaceous, Provence, France, S. FABRE-TAXY Ann. Paléont. Paris 64 1948 p. 76 pl. 1 f. 28.

Iddingsella **nom. nov.** for *Iddingsia* Olsson 1929 non Walcott 1924, OLSSON Bull. Amer. Paleont. 68 (111) 1944: 164 vide etiam W. WENZ Handb. Paläozool. Gastr. i 762 et A. ZILCH Arch. f. Mollusk. 78 1/3 1949 101.

Kiramodulus lacteus **gen. et sp. nov.** off Tosa, Shikoku, Japan, T. KURODA Jap. J. Malac. 15 5/8 1949 pp. 73, 74 text-fig. 1.

†*Lemintina muraensis* **sp. nov.** South of Murona (Hawaisidahe conglomerate beds), Neogene, Japan, Y. OTUKA J. Fac. Sci. Jap. Univ. Tokyo (Geol. 1938 5 1-2 p. 16 pl. ii f. 26, 12, 17.

Melanoides tuberculatus (Muller) on the brood pouch and nutrition of embryos, H. RAMAMURTHY 733; *M. (Plotia) scabra*, *M. (Melanoides) tuberculatus*, figs. and human schistosomes, V. SIVALINGHAM 849; *M. reiniana* in Lake Tyūzenzi, Japan, M. YAMAGUTI 1006.

†*Melanoides (Tarebia) beetsi* **sp. nov.** Neogene, Dent Peninsula, British North Borneo, L. R. Cox Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 23 pl. 1 f. 8 a-c; *M. tigrinus raoi* **var. nov.** p. 303 f. 1 a, b; *M. prashadi* **sp. nov.** p. 304 f. 2 a, b, Andamans, H. C. RAY Rec. Indian Mus. 45 4 1947.

†*Melanopsis impressa pseudonarzolina* n. esp. [nom. nud. here]. A. PAPP 673. *Melanopsis libanensis* sp. nov. Mesozoic, Lebanon. G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 93 text-fig. 66 pl. v f. 5.

†*Nerinea dubertreti* p. 170 text-fig. 130 pl. vi f. 1-3; *N. diozoptymatis* p. 171 text-fig. 132 pl. ii f. 9; *N. zumofeni* p. 177 text-fig. 139 pl. iii f. 3-5; *N. diffusa* p. 179 text-fig. 141-142 pl. iii f. 6; *N. multilamellosa* p. 179 text-fig. 143 pl. vi f. 4; *N. kenissensis* p. 182 pl. v f. 3; *N. prefluviani* p. 185 pl. iii f. 11-15; *N. mutabilis* p. 186 text-figs. 144-145: spp. nov. Mesozoic, Lebanon; *N. blancheti marmorea* var. nov. p. 183 pl. iii f. 8; *N. blanchenhorni* nom. nov. = *requieniana* Fraas non Orb. = *uniplicata* Blankenhorn non Quenstedt p. 189; *N. gemmifera ghazirensis* var. nov. p. 194 text-fig. 151 pl. vii f. 11-12: Mesozoic, Lebanon. G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940; *N. coquandi* Orb. *coquandi signonovi*, *vogti* Mortil, *vogti archimedi* Orb., *gigantea* Hombro-Firmas, figs., K. V. PETKOVIĆ 694; *N. visurgis* Röm. from the Torinosu Limestone, Japan, T. SUGIYAMA & S. ASAO 873.

†*Nerinella libanotica* sp. nov. Mesozoic, Lebanon. G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 161 text-fig. 119-120 pl. i f. 19-20; *N. maruchchiensis* p. 54 pl. iii f. 10-14 text-fig. 9 (p. 42); *N. cayenzi* p. 57 pl. iii f. 18, 19; *N. conroluta* p. 58 pl. iii f. 21-25: spp. nov. Lias Djebel, Bou-Dahar, Morocco. G. DABAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948.

Nerinoidea nom. nov. *Nerinella* Sharpe 1850 non Nardo 1847 type *Aptyxiella* (N.) dupiniana (A. Orbigny) "[*Nerinella*]" [sed vide L. R. Cox & W. J. Arkell Mon. Pal. Soc. London Surv. Moll. Br. Great Oolite Series pt. ii 1950 p. 77], W. WENZ Handb. Paläozoologie 66 1 1940 p. 824.

†*Omphaloptycha aldrovandii* Stopp. O. sp. ind. Trias, Montenegro. Z. BEŠIĆ 78.

†*Orthoetus*? *pauciornatus* sp. nov. Mesozoic, Lebanon. G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 147 fig. 104 pl. vi f. 15.

†*Paracerithium lacostei* p. 86 pl. v f. 47-50 text-fig. 34 (p. 78); *P. echinatum* p. 87 pl. v f. 55 & 56?; *P. ?* p. 89 pl. v f. 60 & 61: spp. nov.; *P. ?* p. 89 pl. v f. 60 & 61: spp. nov. p. 88 pl. v f. 58: Lias Djebel, Bou-Dahar, Morocco. G. DABAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948.

Potamides (*Potamides*) *dujardini* nom. nov. = *Cerithium pulchellum* Dujardin 1837 non J. de C. Sowerby 1832. M. GLIBERT Mem. Mus. Hist. nat. Belge. (2) fasc. 30 1949 p. 134 pl. ix f. 2 a. b.

†*Potamides lamareki* Brong. Paleontological considerations. H. ALDMEN 16.

Potamides (*Potamides*) *lamareki* p. 63 pl. iii f. 34-36; *P. ?* p. 64 pl. iii f. 37, 38 & 39: spp. nov. Lias Djebel, Bou-Dahar, Morocco. G. DABAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948.

†*Protoma quadruplicata turoniensis* nov. forma = *P. proto* D. & D. 1886 non Basterot, Middle Miocene, Loire basin. M. GLIBERT Mém. Mus. Hist. nat. Belge. (2) fasc. 30 1949 p. 120 pl. vii f. 3.

†*Pseudotrionium* nom. nov. *Palaeotrion* Kittl. 1894 91 non Fitzinger 1843, type *P. renustum* (Münster) "[*Scaloria*]", W. WENZ Handb. Paläozoologie 66 1 1940 p. 732.

Pyrulifera pickleri Hornes and sp. ind. of the Senonian, Cheko-Slovakia, figs., Z. BEŠIĆ 77.

†*Semisolarium dubertreti* sp. nov. Mesozoic, Lebanon. G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 32 text-fig. 7 pl. vi f. 10.

†*Taxonella tessellata* sp. nov. Pliocene, Otahuhu, Auckland, N.Z., J. MABWICK Palaeont. Bull. N.Z. pp. 6 28 pl. 7 f. 1.

Torinia cantrainei nom. nov. for *Solarium affine* Cantraine Bull. Acad. Roy. Sci. Brux. 9 pt. 2 p. 342 non J. de C. Sowerby Tr. Geol. Soc. London (2) 5 pt. 1 p. 328 pl. 26 f. 5 1837, Ch. BAYER Zool. Verh. Leiden 4 1948 p. 9; *T. gyrus* (Musch.) = *areola* Gmelin, subsp. *depressiuscula* nom. nov. = *T. variegata depressa* Marshall Tryon Man. Conch. 9 p. 17 1837 (non *depressum* Grat. 1832); *T. r. planulatum* Paetel Catal. p. 287 1837 non *Solarium planulatum* Grat. 1832. Ch. BAYER Zool. eiden Verh. L 1948 p. 22.

†*Turritella* [sic. (*Haustator*)] *sarmatica* 'n. sp.' [nom. nud. here], A. PAPP 673.

Turritella female organs of reproduction, figs., J. KOSTITZINE 472.

Turritella chiesai sp. nov. p. 37 f. 1; *T. c. trilineata* var. nov. p. 38 f. 2; *T. carolai* sp. nov. p. 39 f. 3; *T. rossi* sp. nov. p. 40 f. 4: Maestrichtian, Lybia, C. BRICCHI Riv. ital. Paleont. Milano 55 1 1949; *T. (Torculoidella) praecaricosa* sp. nov. Miocene, Austria, R. SIEBER Anz. Akad. Wiss. Wien 1949 66 pp. 156, 158.

†*Vermetus (Scarpulorbis) arenarius fasciatus* forma nov. Loire basin, Miocene, M. GLIBERT Mém. Mus. Hist. nat. Belge. (2) fasc. 30 1949 p. 127 pl. viii f. 1g.

†*Zefallacia larvi* sp. nov. Pliocene, Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6 29 pl. 7 f. 2-4.

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Capulus ungaricus on *Modiolus* off the Isle of Man, N. S. JONES 423; *C. ungaricus* feeding habits, J. H. ORTON 655.

†*Capulus vautreini* sp. nov. Mesozoic, Lebanon, G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 29 text-fig. 4 pl. ii f. 10.

Crepidula fornicata (L.) in between Portland and Weymouth, T. E. BELCHER 66; *C. nutrition* and sexuality, W. R. COE 166; *C.*—divergent methods of development in morphologically similar species, W. R. COE 167; *C. plana*—sexuality, graphs, figs. and tables, W. R. COE 163; *C. fornicata* L. in the N. Frisian Islands, B. WEBER 975.

Galeropsisiden nom. nov. for *Galeropsis* Kutassy 1937 Geol. Hung. Sér. Pal. 13 56 non Hupé 1860, A. ZILCH Archiv. f. Molluskenk. 78 1/3 1949 101.

STROMBACEA

Aporrhais pespelicani, J. JOHANSSON 418.

†*Chenopus dubertreti* sp. nov. Mesozoic, Lebanon, G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 110 text-fig. 77.

Eustrombus subgen. nov. *Strombus* subgenotype *S. (E.) gigas* Linné, W. WENZ Handb. Paläozoologie 6 6-1 1940 p. 945.

Lambis bryonia (Gmelin) as used as a horn, from the Seychelles, R. WINCKWORTH 988.

Strombus chrysotomus sp. nov. = *S. aurisidiana* (ex parte) Reeve Conch. Icon pl. 15 f. 36a only pp. 3, 7 f. 7, 2; *S. hirasei* Okinawa Ids. sp. nov. pp. 5, 8 f. 3, 4, T. KUBOTA Venus Mukaisima 12 1-2 1942; *S. maculatus* Nuttall off Hawaii, eggs and larval stages, J. M. ØSTERGAARD 658.

†*Strombus (Labiostrombus) overbecki* p. 26 pl. 2 f. 7 a-c; *S. (L.) togapiensis* p. 27 pl. 2 f. 10 a, b; *S. (L.) denti* p. 29 pl. 2 f. 4 a, b, 5: spp. nov.; *S. (L.) labiosus teschi* var. nov. p. 28 pl. 2 f. 8 a, b, Neogene, Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2; *S. ? kelleri* sp. nov. Mesozoic, Lebanon, G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 119 text-fig 84 pl. vi f. 13; *S. antiochensis* sp. nov., F. ROMAN Notes et Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 369 pl. iii f. 5, 5a; *S. silpinsensis* sp. nov., J. ROMAN Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 397 pl. v f. 1, 1a, 2.

†*Strutholaria firthi* sp. nov. Pliocene, Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6, 29 pl. 6 f. 2, 3.

†*Tibia venki* sp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 30 pl. 3 f. 1 a-b, 2; *T. (?) morobica* sp. nov. Mesozoic, Cretaceous, Kaindi M., Lamorphi Group, Snake River, 20 m. N. of Waw Morobe District, New Guinea, M. F. GLAESSNER Mem. Qd. Mus. Brisbane 12 4 1949 p. 174 pl. xv f. 11. 12 text-fig. 6.

†*Xenophora jezleri* sp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 20 pl. 1 f. 11 a-c.

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Atlanta quoyana Souleyet radula, fig., A. FRANC 274.

Carinaria cithara procumbens var. nov. (= ? *C. elata* Sow. 1895) near the Seychelles, and in the Sulu Sea, J. J. TESCH Dana Rep. Copenhagen No. 34 1949 p. 29 pl. iii f. 4 c.

Firoloida desmaresti histological notes, A. FRANC 271.

Pterotrachea mutica Lesueur radula figured, A. FRANC.

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†*Amauropopsis zelandica* sp. nov. W. Escut near Ellewoutsdijk, Holocene, A. BLOKLANDER Basteria Lisse 1949 13 1/3 p. 37 text-fig.

†*Ampullaria faujasi gardenensis* var. nov. Upper Cretaceous, Provence, France, S. FABRE-TAXY Ann. Paléont. Paris 34 1948 p. 80 pl. 1 f. 13.

†*Euspira cantiana* "n. sp." p. 15 f. 16-18=? *Ampullina subdepressa* MORRIS 1852 p. 267 Thanet Sands, near Herne Bay; *E. bassae* sp. nov. Thanet Sands, Bishopstone, near Herne Bay p. 15 f. 19, 20; *E. regnorum* sp. nov. London Clay, Bognor p. 16 f. 21; *E. bartonensis* Middle Barton Beds, Barton sp. nov. p. 17 f. 26; *E. oligocenica* "n. sp."=*Natica nysti* Desh. non Orb. p. 18 f. 27; *E. headonensis* sp. nov.=part of *Natica labellata* var. Edwards, MS., Middle Headon beds, Colwell Bay; *E. vectensis* "n. sp."=*Natica labellata* MORRIS in FORBES 1856 p. 146 pl. 1 f. 6 non LAMARCK p. 10 f. 30, A. WRIGLEY Proc. Malac. Soc. London 1949 28 1.

†*Globularia (Cernina) nakamurai* sp. nov. Miocene, Tyūgoku, Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 pp. 22 37 pl. iii f. 19-21.

Natica (Neverita) josephina Risso variation in growth of the shell, graphs and tables, E. MARCHASINI 574; *N* egg capsules, tigs., G. THORSON 909.

†*Natica* (s. l.) *thanetensis* sp. nov. Thanet Sands, Bishopstone, near Herne Bay, A. WRIGLEY Proc. Malac. Soc. London 1949 28 1 p. 23 f. 43; *N. argillacea* London Clay, Bognor figs. 5, 6; *N. burtoni*=*N. caillati* R. B. Newton non Desh. [nom. nov.], Middle Barton beds, figs. 8-12 'sp. nov.', A. WRIGLEY Proc. Malac. Soc. London 1949 28 1 p. 13; *N. raropunctata sulcooperculata* var. nov. Pliocene, Italy, G. RUGGIERI Giorn. geol. Bologna 3 20 1948 p. 78 pl. i f. 1; *N. catena sarmatica* 'n. ssp.' [nom. nud. here], A. PAPP 673.

Naticidae of the English Eocene and Oligocene, A. WRIGLEY 998.

Polynices (Mammilla) kurodai nom. nov. for *Natica macrostoma* Philippi 1852 Syst. Conch.-Cab. Bd. 2 Abt. 1 p. 55 pl. 9 f. 1 loc. unknown, not F. A. Roemer Verst. Nord-deutsch. oolith (3) 1836 p. 157, I. TAKI (Venus)=Jap. J. Malac. 13 1-4 1943 p. 111 figs. 1-2.

†*Polinices stanleyi* sp. nov. Pliocene, Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6, 30 pl. 6 f. 7, 9, 12; *P. bognorensis* sp. nov. London Clay, Bognor, A. WRIGLEY Proc. Malac. Soc. London 1949 28 1 p. 19 f. 33.

Tectonatica janthostomoides nom. nov. [sp. nov.] Japan, T. KURODA & T. HABE Jap. J. Malac. 15 5/8 1949 p. 71.

†*Tectonatica davisii* sp. nov. London Clay, Newnham, Hants, A. WRIGLEY Proc. Malac. Soc. London 1949 28 1 p. 14 f. 13.

Tella nom. nov. for *Natella* Palmer 1937 non Watson 1934, PALMER J. Paleont. 16 (5) 1942: 674 vide etiam, W. WENZ Handb. Paläozool. Gastr. i. 1040. Arch. f. Moll. 78 1/3 1949 101.

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Caledoniella a commensal species in Japanese Seas, T. KURODA 495.

Eratoidae of the Indian Ocean, H. C. RAY 751.

Pediculariidae of the Indian Ocean. H. C. RAY 751.

Triviidae of the Indian Ocean, H. C. RAY 751.

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†*Cribraria quilonensis* sp. nov. Quilon bed, Padappakar, Travancore State, S. India, A. H. DEY abstract in Proc. Indian Sci. Congr. 1947 33rd 3 p. 104. [List only.]

Cypraea (Vulgusella) tigris fuscoapicata; *C. (Lyncina) lynx nigroguttata* Indian Ocean; *C. (L.) l. javana* Java; *C. (L.) vitellus gibbosa* Guam; *C. (L.) careola* [sic] *pretiosa* Banadin; *C. (L.) carneola aurea* Australia; vars. nov., G. S. COEN Hist. Nat. Roma 3 1 1949 p. 13; *C. carneola* L., *C. isabella* L., *C. caput-serpentis* L., *C. mauritiana* L., *C. poraria* L., of Hawaii Eggs and larval stages, J. M. OSTERGAARD 658; *C. carneola barbadensis* subsp. nov. Barbados, A. H. VERRILL Mollusca Tavares

23 1948 p. 70; *C. carneola* in the West Indies, A. H. VERRILL 950.

Cypraeidae Classification of some allied Japanese species, T. KURODA 504.

Blasicrura cylindrica emaculata Australia **var. nov.**, G. S. COEN Hist. nat. Roma 3 1 1949 p. 17.

Erronea erronea fusca Cochin China; *E. e. immaculata* Benadir; *E. caurica multidentata* Red Sea; *E. c. nitens* Isle Maurice; *E. c. caledonica* New Caledonia; *E. psudarabica* Somalia; **vars. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 17.

Erosaria erosa marginata Red Sea; *E. e. pulchella* Australia **vars. nov.** *E. diaphana* **spl. nov.** Australia; p. 14; *E. lamarchi inocellata* Benadir; *E. ocellata fasciomaculata* Red Sea; *E. acicularis nitidiuscula* Antilles; *E. helvola immaculata* Somalia; *E. spurca peculiaris* Libya. Sicily; *E. s. inflata* Taormina *E. (Rivitrona) caput-serpentis albosignata*; *E. (R.) caput-draconis punctatissima* **vars. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 15.

†*Erosaria sabahensis* p. 32 pl. 3 f. 7 a-b; *E. (Adusta) cowiei* p. 33 pl. 3 f. 4 a-c; *E. (Adusta) poschwitzii* p. 34 pl. 3 f. 3 a-c; **spp. nov.** Neogene, Dent Peninsula, British North Borneo, L. R. Cox Schweiz. Palaeont. Abh. 66 (1945-49) 1948 No. 2.

Guttacypraea pulicaria candida **var. nov.** West Australia; **var. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 16.

Jenneria pustulata bimaculata Panama; *J. p. pumilio* Panama **vars. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 18.

Luponia fuscidentata alba **var. nov.** C. of Good Hope, G. S. COEN Hist. nat. Roma 3 1 1949 p. 16.

Luria lurida onycina, Palermo, Tunisia; *L. l. incrassata* Tirreno; *L. l. badia* Sicily; *L. l. liburnica* Coen 1937; *L. (Basilitrona) isabella cylindroides* Viti Ids. **vars. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 14.

Mauritia (Arabica) arabica dilatata Mar della Cina p. 13; *M. (A.) a. gibba* Mar della Cina; *M. (A.) eglantina aurea* Indian Ocean; *M. (A.) e. rufa* Indian Ocean; *M. (A.) histrio duploreticulata* **vars. nov.** p. 14 G. S. COEN Hist. nat. Roma 3 1 1949.

Monetaria moneta annulifera **var. nov.** Indian Ocean G. S. COEN Hist. nat. Roma 3 1 1949 p. 14.

Notocypraea angustata lentiginosa **var. nov.** Tasmania, G. S. COEN Hist. nat. Roma 3 1 1949 p. 16.

Nuclearia nucleus cerea Madagascar; **var. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 16.

Palmadusta asellus fusca Red Sea; *P. diluculum magnifica* Zanzibar; *P. d. epunctata* Philippines; *P. (Purpuradusta) fimbriata nitida*; **vars. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 17.

Primovula carnea gibbosa Trapani; *P. c. dorsolirata* Capri; *P. c. major* Ancona; Lesina; **vars. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 18.

†*Pseudozonaria simonnei* **sp. nov.** Quilon bed. Padappakara, Travancore State, S. India, A. K. DEY abstract in Proc. Indian Sci. Cong. 1947 33rd 3 p. 104 [list only].

Pustularia circercula purissima **var. nov.** Is. Maurice, G. S. COEN Hist. nat. Roma 3 1 1949 p. 16.

Simnia (Neosimnia) spelta brevis Palermo; *S. (N.) s. lyrica* Dalmatia **vars. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 18.

Siphocypraea mus suta **var. nov.** Antilles, G. S. COEN Hist. nat. Roma 3 1 1949 p. 17.

Staphylaea staphylaea fortis Polynesia; *S. s. nitida* Australia; *S. s. consobrina lactea* Batavia; *S. s. c. grisea* Polynesia; *S. limacina ebur* Hawaii; *S. l. nitens* Oceania; **vars. nov.** G. S. COEN Hist. nat. Roma 3 1 1949 p. 15.

Zoila rosselli **sp. nov.** Freemantle, W. Australia from a beach near North Wharf "just beyond the wall where all sorts of rubbish comes ashore," B. C. COTTON Trans. roy. Soc. S. Aust. 1948 72 1 p. 30 pl. i f. 1-6.

†*Zoila schilderi* **sp. nov.** Quilon bed. Padappakara, Travancore State, S. India, A. K. DEY abstract in Proc. Indian Sci. Congr. 1947 33rd 3 p. 104 [list only].

Zonaria pyrum elongata Naples; *Z. p. cruenta* Naples; *Z. p. piperioides* Naples; *Z. p. compressa* Tirreno; *Z. p. nivosa* Linosa, Lampedusa; *Z. p. aurantia* Mediterranean **vars. nov.** *Z. p. minima* Viareggio, G. S. COEN, G. H. COEN Hist. nat. Roma 3 1 1949.

†*Zonarina travancorica* **sp. nov.** Quilon bed. Padappakara, Travancore State, S. India, A. K. DAY abstract in Proc. Indian Sci. Congr. 1947 33rd 3 p. 104 [list only].

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Bursidae synonymy, nomenclature and ranges of species, MAXWELL SMITH 852.

Cassididae synonymy, nomenclature and range of species, MAXWELL SMITH 852.

Cassis rufa (L.) as used as a horn, from the Seychelles fig., R. WINCKWORTH 988.

Charonia lampas (L.) in the lower littoral zone, B. S. KISCH 457; *C. lampas* (L.) further observations on occurrence, B. S. KISCH 458; *C. tritonis* (L.) as used as a horn from the Seychelles fig., R. WINCKWORTH 988.

Cymatiidae synonymy, nomenclature and range of species, MAXWELL SMITH 852.

†*Cymatium* (*Lampusia*) *pileare borneana* **var. nov.** Neogene Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 39 pl. 4 f. 1 a-b.

Dissentoma, the embryonic stage of *Cymatium martinianum* (Orb.) H. A. PILSBRY Nautilus Philad. 1949 62 4 p. 142.

Dolium egg capsules, fig., G. THORSON 909.

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Fusitriton algoensis Tomlin a synonym of *murrayi* E. A. Smith, fig. of radula, K. H. BARNARD 56.

Galeodea Link 1807 (= *Cassidaria* Lk. 1812) "Dieser Name ist nicht durch *Galeodes* Olivier 1791 präokkupierrt," W. WENZ Handb. Paläozool. Gastr. 1 1047, A. ZILCH Arch. Mollusk 78 1/3 1949 p. 101.

Goniodiscus ruderatus study in, J. ROYER 780.

Malca pomum (L.) in Hawaiian waters smallest of the Hawaiian Tuk shells, S. FISCHER 916.

Oocorys, a review of the genus, figs., R. D. TURNER 924; *O. schepmani* **nom. nov.** for *O. elongata* Schepman 1909 Siboga Exped. non *O. sulcata elongata* Locard 1897, R. D. TURNER Johnsonia 2 26 1948 p. 190.

†*Phalium* (*Semicassis*) *dalrymplei* **sp. nov.** Neogene Dent Peninsula, British North Borneo L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 37 pl. 1 f. 10 a-b.

Tonna perdis L. of Hawai eggs and larval stages, figs., J. M. OSTERGAARD 658; *T. sp.* egg-mass from Krusadai Island, N. K. PANIKKAR & P. R. S. TAMPI 672; *T. maculosa* Dillwyn specimen no. 113091 Simms, Long Island, Bahamas, designated as 'neoholotype,' R. D. TURNER Johnsonia 2 26 p. 170 pl. 76 f. 1 [a poor photographic reproduction]; *T. canaliculata* (L.), *T. dolium* (L.), *T. perdis* (L.), from Hawaii, figs., S. TINKER 916; *T. melanostoma* Jay, second in abundance to *T. perdis* in Hawaiian waters, S. TINKER 916.

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EPITONIACEA

Epitonium (*Cirsotrema*) *pilsbryi*—a correction, T. L. MCGINTY Nautilus Philad. 1949 62 4 p. 142.

Habea **gen. nov.** Epitoniidae, sole sp. [genotype] *inazwai* Kamakura Japan, T. KURODA 'Venus' Jap. J. Malac. Mukaisima 13 1-4 1943 p. 12 text-fig.

Janthina erigna Lamarek in Cornwall, T. G. W. FOWLER 268.

Opalia montereyensis (Dall) is a very immature stage of *O. pluricostata* "Carpenter" Dall 1917 recorded from numerous localities as *Opalia evicta* (*pluricostata*) and *O. wroblewskii*; *montereyensis* is the oldest unpreoccupied name and therefore stands, S. S. BERRY 75; *O. (Pliciscala) soror* (de Boury 1909 in coll.) **nov. sp.** Miocene Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 p. 161 pl. x f. 15 a-b.

†*Opalia* (*Dentiscala*) *fratercula* (de Boury 1909 in coll.) **nov. sp.** Miocene Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 p. 159 pl. x f. 8.

Scala (*Parviscala*) *rugata* (de Boury 1909 in coll.) **nov. sp.** Miocene Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 p. 170 pl. xi f. 4.

†*Scala* (*Acrilla*) *pseudogallica* **sp. nov.** Miocene Loire basin, M. GLIBERT Mém. Mus. Hist. nat. Belg. (2) fasc. 30 1949 p. 167 pl. x f. 22.

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Brachystomia *rissoides* (Hanl.) eggs and larvae, figs., E. RASMUSSEN 740.

Cambodgita **nom. nov.** for *Cambodgia* Mansuy 1914 non Guenée 1857 STRAND Arch. Naturg. 92A (8): 42 vide etiam W. WENZ Handb. Paläozool. Gastr. 1 p. 371, et A. ZILCH Archiv. f. Mollusk. 78 1/3 1949 p. 101.

†*Coelostylina* (*Omphaloptycha*) *rigida*; *C.* (*Cosmostylina* **subgen. nov.** q.v.) *darestei* p. 104 pl. viii f. 7–11 text-figs. 36 (p. 115); *C.* (*Cosmostylina*) *lima* p. 105 pl. viii f. 12 a–b; **spp. nov.** Lias Djebel Bon-Dahar Morocco, G. DUBAR Notes et Mém. Serv. mines Carte. Geol. Maroc 68 1948.

†*Cosmostylina* **subgen. nov.** of *Coelostylina*, subgenotype *darestei* **sp. nov.** Lias Djebel Bou-Dahar Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1945 p. 103–104 pl. viii f. 7–11 text-fig. 36 (p. 115).

Eulimella *nitidissima* (Mont.) eggs and larvae, figs., E. RASMUSSEN 740.

Fusoidella Wenz 1938 = *Fusoidella* Kutassy 1937 (Geol. Hung. Ser. Pal. 13), W. WENZ Handb. Paläozool. Gastr. Bd. 1 p. 373 vide etiam, A. ZILCH Archiv. f. Mollusk. 78 1/3 1949 p. 101.

†*Gardetia* **subgen. nov.** of *Pseudomelania* for *Turritella* (*Trypanostylus*?) *chouberti* Gardet. Domesian Djebel Bou-Dahar Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc. 68 1948 p. 116 pl. vii f. 18–20 & 21?

Iolina **nom. nov.** for *Iolaea* A. Adams 1860 non *Iolea* Pascoe 1858 BAILY Nautilus 61 (3) 1948: 107 "Apo-Monotypus" is *Iolea scitula* Adams ZILCH Arch. f. mollusk. 78 1/3 1949: 101 et W. WENZ Handb. Paläozool. Gastr. i p. 851.

†*Loxonema australis* (Chapman) (= *L. sinuosa* Sow. var. *australis*) in the Devonian, Victoria, Australia, figs., E. D. GILL 300.

Melanella *comatulicola* (Graff.) parasitic upon *Antedon*, G. BACCI 44.

†*Microschiza* (*Cloughtonia*) *marounensis* p. 72 f. 46; *M.* (*Coronatica*) *heybroeki* p. 76 f. 51 **spp. nov.** Mesozoic Lebanon, G. DELPEY Notes et Mém. Haut.-Comm. Républ. Franc. Syrie et Au Liban 3 1940.

Mucronalia *angulata* **sp. nov.** parasitic on *Holothuria cinerascens* Ile de Paques, G. MANDAHL-BARTH Jour. de Conchyliol. Paris 89 3 1949 p. 147 pl. viii.

Niso tetuakii **sp. nov.** off Tosa Shikoku 150 m. Japan, T. HABA Jap. J. Malac. 15 5 1949 pp. 81–82 f. 2.

Odostomia *trifida* Totten living commensally on the siphon ends of *Mya arenaria* L. Gulf of S. Lawrence, J. C. MEDCOF 595; *O.* (*Chrysallida*) *sorenseni* p. 87 pl. 11 f. 3; *O.* (*Ividella*) *ulloana* p. 88 pl. 11 f. 1; *O.* (*Menestro*) *ciguatanis* p. 89 pl. 12 f. 3: **spp. nov.** Gulf of California, A. M. STRONG Bull. S. Calif. Acad. Sci. 48 2 1949; *Odostomia* parasitic on Polychaetes and Lamellibranchs, V. M. FRETTER 277; *O. unidentata*, *O. plicata*, *O. lukisii* structure and mode of life, figs., V. FRETTER & A. GRAHAM 278.

†*Pseudomelania* (*Oonia*?) *marucchiensis* p. 111 pl. ix f. 10–13; *P. dealbata* p. 112 pl. vi f. 3–7; *P.* (*Rhodoconcha*?) *tenuestriata* p. 113 pl. vi f. 8–10 text-fig. 38–39 (p. 115); *P.?* *chrysalis* p. 114 pl. vi f. 11–13 text-fig. 40; **spp. nov.** Lias Djebel Bou-Dahar Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte. Geol. Maroc 68 1948.

Pyramidellidae systematic position, KUBODA & HABA 514.

†*Rigauscia* *baculus* **sp. nov.** Lias Djebel Bou-Dahar Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc 68 1948 p. 100 pl. ix f. 2–6 text-figs., 35 a–b (p. 115).

†*Spharrodroma* **sp. nov.** from the Tienksikfu Coalfield, Japan, M. NODA 648.

Stilifer (Ercolania) smaragdinus sp. nov. off Sajima, Sagami Bay, K. BABA Opisthobranchia of Sagami Bay. Tokyo 1949 pp. 32, 129 pl. vii f. 22 text-figs. 18-19.

†*Streptacis verbisti* sp. nov. p. 7 pl. ii f. 8-9; *S. kempensis* p. 8 pl. ii f. 7 spp. nov. Charbonnages Limbourg-Meuse, F. DEMANET Bull. Inst. R. Sci. nat. Belg. 1949 25 37.

Turbonilla (Chemnitzia) sinaloana p. 73 pl. 12 f. 2; *T. (Strioturbonilla) asuncionis* p. 76 pl. 12 f. 6; *T. (Pyrgiscus) alarconi* p. 79 pl. 12 f. 5; *T. (P.) kaliwana* p. 79 pl. 11 f. 6; *T. (P.) guaicurana* p. 80 pl. 12 f. 1; *T. (P.) aripana* p. 81 pl. 11 f. 5; *T. (P.) cochimiana* p. 82 pl. 12 f. 4; *T. (P.) pericuana* p. 82 pl. 11 f. 4 spp. nov. Gulf of California, A. M. STRONG Bull. S. Calif. Acad. Sci. 48 2 1949; *T. (Bartschella) bartschiana* nom. nov. var.; *T. (B.) bartschi* S. & G. 1948 non *T. (Bartschopsis) bartschi* Aguayo & Rehder 1933, A. G. SMITH & M. GORDON Jr. Nautilus Philad. 1949 62 3 p. 105.

†*Zygopleura pectita* p. 97 pl. viii f. 1-3; *Z. menchikoffi* p. 100 pl. viii f. 4-6 spp. nov. Lias Djebel Bou-Dakar Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc. 68 1948.

STENOGLOSSA

(α) RHACHIOGLOSSA

MURICACEA

Chicoreus asianus nom. nov. p. 80 for *Murex elongatus* Lk. 1822, non Solander 1786 *Murex sinensis* Rve 1845 non Gmelin 1791; *C. (Siratus) pliciferoides* nom. nov. p. 81 for *Murex pliciferus* Sow. 1841 non Bivona 1832, T. KURODA Venus Mukaisima 12 1-2 1942.

Morula dumosa (Conrad) of Hawaii eggs and larval stages, figs., J. M. OSTERGAARD 658.

Murex experiments on muscular reactions, M. BACQ 49. *Murex trunculus brandaris* on the purple extracts, V. ERSPAMER 237; *M. t.* purple gland extract, A. JULIAN & J. RIFPLINGER 429; *M.* egg capsules, figs., G. THORSON 909.

†*Murex (Chicoreus) altenai* sp. nov. Eugene Dent. Peninsula British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 46 pl. 4

f. 2 a-c; *M. torularius inermis* var. nov. F. ROMAN Notes et Mém. Haut-Comm. Républ. Franc. Syria et Au Liban 3 1940 p. 365 pl. ii f. 5, 5a.

†*Neothais lassa* sp. nov. Pliocene Otahuhu Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6 32 pl. 7 f. 4.

†*Otahua bartrumi* gen. et sp. nov. Muricidae Pliocene Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6 32 pl. 7 f. 5, 6, 12, 13.

Purpura female organs of reproduction, figs., J. KOSTITZINE 472; *P. lapillus* L. variation due to diet *Mytilus* fed specimens give brown and mauve colouring *Balanus* feeding giving white forms, W. J. REES 754.

Rapana bulbosa egg capsules, fig., G. THORSON 909.

Timothia nom. nov. for *Aldrichia* Palmer 1938 non Coquillett nec Vaughan. PALMER Bull. Amer. Paleont. 24 1938 3 vide etiam W. WENZ Handb. Paleozool. Gast. I. 1130 et A. ZILCH Archiv. J. Mollusk. 78 1/3 1949 101.

Tritonalia erinacea, on the purple extract, V. ERSPAMER 237.

Trophon clathratus (L.) and var. *gunneri* Lovén egg capsules and embryos figs., G. THORSON 910.

†*Xymene coctor* sp. nov. Pliocene Otahuhu, Auckland, N.Z., V. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 16 32 pl. 7 f. 8.

BUCCINACEA

Antemetula Rehder in the Indo-West Pacific area, C. O. v. R. ALTENA 21.

†*Cominella (Coministra) altispira* pp. 6 31 pl. 7 f. 7 16-17; *C. (Acominia) dingleyi* pp. 6 31 pl. 7 f. 9, 15 spp. nov. Pliocene Otahuhu, Auckland, J. MARWICK Palaeont. Bull. N.Z. 16 1948.

Buccinidae sexual dimorphism of certain species, R. TIBA 914.

Buccinum undatum pelagica Krieg a large example, P. KAAS 489.

Chrysodomus turtoni (Bean) egg capsules and embryos, figs., G. THORSON 910.

Fusinus spectrum (Ad. & Rve.) a new record for the Gulf of Mexico 25 m. off Tarpon Springs Fla., fig., J. G. SCHWENGEI. 830.

Fusus acanthodes (Watson) figs. pls. ii, iii, A. CARCELLES 135.

Kautskyella nom. nov. for *Eurydike* Kautsky 1925 (Abh. preuss. geol. Landescent. N.E. 97: 127) non *Eurydice* Eschscholtz 1925, W. WENZ Handb. Paläozool. Gastr. i: 1265 etiam A. ZITCH Arch. f. Mollusk. 78 1/3 1949: 101.

Nassa (*Amycla*) *dertonensis italicistria* var. nov. p. 86 pl. ii f. 5 a-b; *N. (A.) dertonensis neogigas* var. nov. p. 87 pl. ii f. 6 a-b: Pliocene, Italy; *N. (A.) gigantula perigantea* var. nov. Pliocene Italy p. 86 pl. ii f. 4, G. RUGGIERI Giorn. Geol. Bologna 3 20 1948.

†*Nassa* (*Uzita*) *gattii* sp. nov. Pliocene [nom. nud.], G. RUGGIERI 785.

Neptunea antiqua egg capsules, G. THORSON 909.

Sipho undulatus Friele egg capsules and embryos, figs., G. THORSON 910; *S. islandicus* egg capsules, fig., G. THORSON 909.

Troschelia berniciensis (King) egg capsules and embryos, fig., G. THORSON 910.

†*Verconella gauli* sp. nov. Pliocene, Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 pp. 6 31 p. 31.

Volutopsis norvegica (Chem) egg capsules, figs., G. THORSON 910.

VOLUTACEA

Amoria newmanae sp. nov. North Western Australia, B. C. COTTON Rec. S. Aust. Mus. Adelaide 9 2 1949 p. 192 pl. 13.

†*Aulica martini* p. 49 pl. 5 f. 2 a, b; *A. molengraaffi* p. 50 pl. 5 f. 1 a-b: spp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2.

†*Austrovoluta* gen. nov. Volutidae, genotype *Voluta antiscalaris* McCoy 1874 Fyansford, Victoria, Upper Pliocene and Middle Miocene, B. C. COTTON Rec. S. Aust. Mus. Adelaide 9 2 1949 p. 185.

Bivetiella subgen. nov. (of *Cancellaria*) = *Bivetia* auctt. (not *Bivetia* Jousseaume 1887), type sp. *Cancellaria similis* Sow. recent, W. coast of Africa, J. G. MARKS J. Paleont. Menasha Wis. 23 5 1949 p. 456.

†*Cancellaria* (*Hertleinia*) *angosturana* p. 463 pl. 78 f. 1, 2 Angostura Cave, Ecuador, Basal Miocene; *C. casicalva* p. 464 pl. 78 f. 3, 10 Middle Miocene, Central coastal Ecuador; *C. sursalta* p. 461 pl. 78 f. 4, Lower Miocene, Ecuador; *C. (Bivetiella) frizzelli* p. 462 pl. 78 f. 5, Mid Miocene, Ecuador; *C. (B.) santiagensis* p. 462 pl. 78 f. 6, Miocene, N. Ecuador: spp. nov., J. G. MARKS J. Paleont. Menasha Wis. 23 5 1949.

†*Cryptospira pilzi* sp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 52 pl. 5 f. 10 a, b.

Harpidae synonymy, nomenclature and range of species, MAXWELL SMITH 852.

Hertleinia subgen. nov. of *Cancellaria* type *Cancellaria mitrififormis* Sow. 1832 recent W. coast of Africa, J. G. MARKS J. Paleont. Menasha 23 5 1949 p. 457.

†*Marginella clisia* Pliocene p. 212 pl. xvii Victoria; *M. physa* p. 212 pl. xviii Adelaide Plains; *M. regula* p. 213 pl. xviii Aldinga; *M. meta* p. 213 pl. xviii Adelaide Plains; *M. doma* p. 213 pl. xviii Adelaide Plains; *M. clima* p. 213 pl. xviii Adelaide Plains; *M. metula* p. 214 pl. xviii Adelaide Plains; *M. arena* p. 214 pl. xviii Adelaide Plains; *M. talla* p. 214 pl. xviii Adelaide Plains; *M. pera* p. 215 pl. xvii Victoria; *M. palla* p. 215 pl. xviii Adelaide Bore; *M. mala* p. 215 pl. xviii Aldinga; *M. charma* p. 215 pl. xviii Adelaide Plains; *M. cassida* p. 216 pl. xviii Adelaide Plains; *M. sagma* p. 216 pl. xviii Adelaide Plains; *M. crista* p. 216 pl. xviii Adelaide Plains; *M. newmanae* p. 199 pl. xx W. A. Esperance; *M. baco* p. 200 Cape Pillar, Tas., 100 fms.; *M. sica* p. 200 W. A. Eucla 200 fms.; *M. patria* p. 201 W. A. Hopetoun 35 fms.: spp. nov.; *M. stiria* nom. mut. p. 209 for *M. rotunda* Laseon 1948 non May 1922, B. C. COTTON Rec. S. Aust. Mus. Adelaide 9 2 1949.

Mauira nom. nov. for *Mauia* Marwick 1926 non Blackburn 1885, MARWICK Trans. Proc. roy. Soc. N.Z. 73 1943 (3): 192 vide etiam, W. WENZ Handb. Paläozool. Gastr. 1: 1341, et A. ZITCH Arch. f. Mollusk. 78 1/3 1949: 101.

Mitra astricta, *M. auriculoides* Rve of Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658; *M. larrañagai* sp. nov. lat. 34° 50' long. 52° 20', A. CARCELLES Comun. Zool. Mus. Hist. nat. Montevideo 2 40 1947 p. 9 figs. 4-5.

Nannamoria absidata sp. nov. Muddy Creek, Lower Beds, figured by Tate 1889 as "*N. lirata*" Johnston from a specimen in the Tate Museum, B. C. COTTON Rec. S. Aust. Mus. Adelaide 9 2 1949 p. 192 pl. 14.

†*Oliva (Anazola) hattoni* sp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. Cox Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 53 pl. 5 f. 6 a, b.

Provocator corderoi sp. nov. Argentina, A. CARCELLES Comun. zool. Mus. Hist. nat. Montevideo 2 40 1947 p. 5 pl. 1.

Ptychactractus sasamorii sp. nov. Etorohus, Fisima, Kuriles, T. KURODA Jap. J. Malac. 13 1/4 1943 pp. 2, 7 text-fig. 1.

†*Pyropsis desioi* sp. nov. Maestrichtian Basin of Sofeggin-Orfella, Lybia, C. BRICCHI Riv. ital. Paleont. Milano 55 3 1949 p. 116 text-figs.

Saotomea subgen. nov. of *Fulgoraria* for *F. (S.) delicata* (Fulton)—Volutidae, T. HABE (Venus)=Jap. J. Malac. 13 1-4 1943 p. 73 radula figured pl. 3 f. 16.

†*Scaphella vignyensis* sp. nov. Cretaceous, Vigny, France, A. CHAVAN C.R. Séances Soc. géol. Fr. Paris 6 1949 p. 105 f. 7.

Unitas nom. nov. for *Uxia* Jousseau 1887 non Walker 1866, PALMER Vgl. J. de Conch. 87 1947: 141, footnote vide etiam W. WENZ Handb. Paläozool. Gastr. 1: 1367; et A. ZILCH Arch. f. Mollusk. 78 1/3 1949: 101.

†*Vexillum schürmanni* sp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. Cox Schweiz. Paläont. Abh. 66 (1948-9) 1948 No. 2 p. 48 pl. 5 f. 4 a, b.

Xancus pyrum (L.) description of the veliger larvae, K. CHIDAMBARAM & M. M. UNNY 154.

STENOGLOSSA (β) TOXOGLOSSA

CONACEA

†*Benoitia* [?] *Benoistia* *pisolithica* sp. nov. Cretaceous, Vigny, France, A. CHAVAN C.R. Séances Soc. géol. Fr. Paris 6 1949 p. 105 f. 6.

†*Borsonia sanchezi* sp. nov. Middle Miocene, Cessanas de la Ciudad. Baracoa, Oriente, Cuba, C. G. AGUAYO Rev. Soc. Malac. Habana 7 1 1949: 12 text-fig. 6.

†*Clavus (Clathrodrillia) oostinghi* sp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. Cox Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 56 pl. 5 f. 11 a, b.

Conus egg capsules, fig., G. THORSON 909; *C. gloria-maris*, figs., A. F. BRUUN 122; *C. gloria-maris* Chem. in collections, W. S. V. D. FEEN v. B. JUTTING 244; *C. tahitensis rattus* Hwass, *C. omaria* Hwass, *C. catus* Hwass, *C. hebraeus* L., *C. sumatrensis* Hwass, *S. abbreviatus* Nuttall, of Hawaii. eggs and larval stages, figs., J. M. OSTERGAARD 658.

†*Conus durhami* sp. nov. p. 306 pl. 5 f. 16; *C. bramkampii* sp. nov. p. 314 pl. 8 f. 14 Pliocene, S. side of Carrizo Mountain, Imperial County, California; *C. b.=C. regularis* "Sow." Hanna P. Calif. Ac. Sci. (4) 14 1946 No. 18 p. 447 pl. 21 f. 8, HANNA & STRONG Proc. Calif. Acad. Sci. (4) 36 9 1949; *C. vlerki* p. 59 pl. 6 f. 3 a-d; *C. stigandi* p. 60 pl. 6 f. 6 a, b: spp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. Cox Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2.

Drillia roseobasis (= *Pleurotoma testudinis* P. & V.) and *Pleurotoma albicostata* (Sowerby) requires further collecting to confirm or disprove identity, H. A. PILSBRY 712.

Monilispira ochsneri nom. nov. for *Pleurotoma bicolor* Sow. 1833 non Risso 1826, L. G. HERTLEIN & A. M. STRONG Nautilus Philad. 1949 62 3 p. 103.

Pleurotoma albicostata Sow. 1833 conspecific? with *Drillia roseobasis* Pils. & Van 1902=*P. roseotincta* Dall. 1918=*P. testudinis* Pils. & Van. 1923, L. G. HERTLEIN & A. M. STRONG 354.

Terebra micans at Lagos ecological notes, F. J. HARPER 349.

Terebellina Wenz 1943=*Mirula* Palmer 1942 J. Paleont. 16 (5): 674, W. WENZ Handb. Paläozool. Gastr. 1 1486 et A. ZILCH Arch. f. Mollusk. 78 1/3 1949: 101.

Opisthobranchiata

BULLACEA

Acteocina lajonkaiensis ventricosa and *maxima* subspp. nov., *A. heraclitica* sp. nov. Tertiary, Wiener Beckens, W. BERGER Anz. Akad. Wiss. Wien. 1949 86 pp. 81, 83.

Acteon kirai sp. nov. off Tosa, Skikoku 70 m. Japan, T. HABA Jap. J. Malac. 15 5/8 1949 p. 81. 8B fig. 1; *A. ozawai* pp. 22, 43 pl. iii f. 27; *A. ? ogurai* pp. 22, 43 pl. iii f. 26 : spp. nov. Miocene, Tyūgoku, Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2.

†*Actaeonella zumoffeni* p. 231 pl. v f. 11, 11a; *A. ghazirensis* p. 233 text-figs. 183-184 pl. xi f. 11-12; *A. duberteti* p. 235 pl. x f. 9 : spp. nov. Mesozoic, Lebanon, G. DELPEY Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940.

†*Actaeonina radius* sp. nov. Lias, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc. 68 1948 p. 40 pl. 1 f. 4-5 text-fig. 1.

Aglaja [*Aglaja*] *orientalis* sp. nov. off Kursadi, Sagami Bay, K. BABA Opisthobranchia of Sagami Bay 1949 pp. 21, 123 pl. 1 f. 3.

Atys semistriatus Pease, Hawaii eggs and larval stages, figs., J. M. OSTERGAARD 658.

†*Atys* (*Alicula*) *lapugyensis* sp. nov. Tertiary, Wiener Beckens, W. BERGER An. Akad. Wiss. Wien 1949 86 pp. 80, 82.

†*Boehmia speciosa* p. 43 pl. 1 f. 10, 11, 12 text-fig. 2; *B. costata* p. 44 pl. 1 f. 13-15 text-fig. 3 Lias Djebel, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc. 63 1948.

Bullina scabra solida Pilsbry from Hawaii, eggs and larval stages, J. M. OSTERGAARD 658.

Chelidonura inornata sp. nov. Hayama, Sagami Bay, occurring also in Bonin Is., K. BABA Opisthobranchia of Sagami Bay 1949 pp. 22, 124 pl. ii f. 5.

†*Cosmophilina marinellii* gen. et sp. nov. Philinidae Tertiary, Wiener Beckens, W. BERGER Anz. Akad. Wiss. Wien 1949 86 pp. 81, 83.

†*Cylichna subbacillus* 'n. sp.', W. BERGER 70.

†*Cylindrites sigillum* sp. nov. Lias, Bou-Dahar, Morocco, G. DUBAR Notes et Mém. Serv. Mines Carte Geol. Maroc. 68 1948 p. 41 pl. 1 f. 6 a-b.

Haminoea crocata Pease from Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658.

Hydatina amplustre (L.), *H. physis* (L.) from Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658.

Notarchus striatus Q. & G. from Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658.

Philina argentina sp. nov. Lat. 37° 35' 3" S., Long. 54° 53' 3" W. type No. 25175 Mus. Argent. Sci. Nat., A. CARCELLES Comun. zool. Mus. Hist. Nat. Montevideo 2 40 1947 p. 2 f. 1-3.

†*Philina catena eoponderosa* var. nov. Pliocene, Italy, G. RUGGERI Giorn. geol. Bologna 3 20 1948 p. 61 f. 3.

Retusa truncatula (Brug.) eggs and larvae, figs., E. RASMUSSEN 740.

†*Retusa truncatula grundensis*, *t. sarmatica*, *t. jekelii* subspp. nov., *R. vindobonensis* sp. nov., *R. (Acrostemma) edlaueri*, *R. (A.) kühnelti* spp. nov., *R. mammillata voeslaviensis* subsp. nov., *R. (Conoretusa) elongata sulcata* subsp. nov., *R. (C.) leuchsi* sp. nov., *R. (Pyrrunculus) austriaca*, *R. (P.) postneglecta* spp. nov. Tertiary, Wiener Beckens, W. BERGER Anz. Akad. Wiss. Wien 1949 86 pp. 80-83.

Roxania (*Sabatia*) *callifera helvetica* subsp. nov. Tertiary, Wiener Beckens, W. BERGER Anz. Akad. Wiss. Wien 1949 86 pp. 81, 83.

Volvulus perversus Oken designated as genotype of *Volvulus* Oken 1815, A. E. ELLIS J. Conch. London 1949 23 2 p. 51.

APLYSIACEA

Aplysia sagamiana sp. nov. Kamekishō, Sagami Bay, K. BABA Opisthobranchia of Sagami Bay, Tokyo 1949 pp. 26, 126, pl. iv, f. 15, 16 text-fig. 8; *A. limacina* L. experimental, A. PELTRERA 688.

Dolabrifera olivacea Pease from Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658.

Tethys (= *Aplysia*) *grandis* (Pease), *T.* (= *A.*) *bipes* (Pease), *T.* (= *A.*) *elongata* (Pease) of Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658. *Tethys*, note on the name, A. PRUVOT-FOL 725.

Umbraculum sinicum (Gmelin) Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658.

PTEROPODA

†*Clio vrazii* sp. nov. Tortonian, Moravia, M. VAŠÍČEK Veštník Stet. Geol. Ust. Československi Rep. 24 1949 pp. 32, 35 pl. 1 f. 2 a, b.

Nudibranchiata

PLEUROBRANCHACEA

Pleurobranchus (*Susania*) *atlanticus* Soldier Key, Biscayne Bay, Florida sp. nov., R. T. ABBOTT Nautilus Philad. 1949 62 3 p. 73 pl. 5 f. 1-10; *P.*—Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658.

ELYSIACEA

Alderia modesta found in Bromborough Pool, Cheshire, N. F. McMILLAN 567.

Elysia (*Elysia*) *trisinuata* off Nishinozaki pp. 132 pl. ix f. 30, 31 text-fig. 27; *E.* (*E.*) *splendens* off Nishinozaki pp. 132 pl. x f. 32 text-fig. 28: spp. nov. Sagami Bay, K. BABA Opisthobranchia of Sagami Bay, Tokyo 1949; *E.* of Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658.

Hermæina (*Hermæina*) *orientalis* Kamekishō pp. 32, 130 p. viii f. 23 text-fig. 20-21, *H.* (*H.*) *nigra* off Nishinozaki pp. 33, 130 pl. viii f. 24 text-fig. 22, 23 spp. nov. Sagami Bay, K. BABA Opisthobranchia of Sagami Bay, Tokyo 1949.

Limapontia depressa in Bromborough Pool, Cheshire, N. F. McMILLAN 567; *L. depressa* Ald. & Hanc. in Suffolk and Glamorgan, H. E. QUICK 730.

Oxynoe new to Japanese waters, T. HABE 340.

DORIDACEA

Ceratosoma bicolor sp. nov. Kamekishō, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 56, 146 pl. xx f. 74 text-fig. 66.

Crimora lutea sp. nov. off Kurosaki, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 39, 133 pl. x f. 38 text-fig. 33.

Cryptodoris of Hawaii, eggs and development, fig., J. M. OSTERGAARD 658.

Drepanoconcha nom. nov. for *Drepania* Gregorio 1930 (Ann. Géol. Paléont. Palermo 53) non Huebner 1816 nec Lafont 1874, W. WENZ Handb. Paläozool. Gastr. Bd. 1: 203 et A. ZILCH Archiv. f. Mollusk. 78 1/3 1949: 101.

Glossodoris maritima Hayama pp. 52, 142 pl. xviii, f. 64 text-fig. 57; *G. placida* Hayama pp. 52, 142 pl. xviii f. 65 text-fig. 58; *G. sagamiensis* Nishinozaki pp. 53, 143 pl. xviii f. 66 text-fig. 59; *G. florens* Hayama pp. 53, 143 pl. xix f. 67 text-fig. 60: spp. nov. K. BABA Opisthobranchia of Sagami Bay, Tokio 1949.

Goniodoris felis sp. nov. Hayama, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 47, 139 pl. xvi f. 55 text-fig. 48.

Gymnodoris subflava sp. nov. Hayama, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 41, 135 pl. xii f. 44 text-fig. 38.

Halgerda rubicunda sp. nov. Akiya, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 67, 153 pl. xxv f. 94-95 text-fig. 82.

Hexabranchus of Hawaii, eggs and larval stages, figs., J. M. OSTERGAARD 658.

Hopkinsia rosacea rose-pink colour due to Hopkinsiaxanthin content, H. H. STRAIN 867.

Noumea parva pp. 54, 144 pl. xix f. 69 text-fig. 62; *N. purpurea* pp. 55, 144 pl. xix f. 70 text-fig. 63: spp. nov. Hayama, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949.

Okenia (*Okenia*) *japonica* pp. 45, 138 pl. xv f. 52 text-fig. 45; *O.* (*O.*) *echinata* pp. 46, 138 pl. xv f. 53 text-fig. 46, spp. nov. off Sajuma, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949.

Paratritonia gen. nov. Duvauceliidae, type *P. lutea* sp. nov. Amadaiba, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 18, 84, 166 pl. xxxiv f. 123 text-figs. 104-106.

Polycera japonica **sp. nov.** Hayama, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 39, 134 pl. xi f. 36 text-fig. 34.

Tritoniopsilla alba **sp. nov.** off Sajima, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 84, 165 pl. xxxiv f. 122 text-fig. 103.

AEOLIDIACEA

Aeolidia of Hawaii, eggs and larval stages, figs., J. M. ONTERGAARD 658.

Armina (*Armina*) *major* Kamekishô pp. 79, 162 pl. xxxi f. 117 text-fig. 94-95; *A. (A.) appendiculata* off Sagima pp. 80, 163 pl. xxxii f. 118 text fig. 96-97: **spp. nov.** Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949.

Baeolidia fusiformis **sp. nov.** off Kurosaki, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 20, 184 pl. I f. 169 text-figs. 158-159.

Bornella japonica **sp. nov.** Kamekishô, Sagami Bay, K. BABA 'Opisthobranchia of Sagami Bay,' Tokyo 1949 pp. 88, 168 pl. xxxv f. 129 text-fig. 111.

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†*Planorbis kennardi* nom. nov. for *P. praecursor* Kennard & Woodward. A. E. ELLIS J. Conch. London 1949 23 2 p. 51.

†*Spiralis holubi* sp. nov. Tortonian. Moravia, M. VAŠÍČEK Vestník. Stet. Geol. Úst. Československi Rep. 24 1949 pp. 32, 35 pl. 1 f. 1 a-d.

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Neopetraeus steizneri apertus subsp. nov. Colorado, M. I. H. SCOTT Acta zool. Lillo Tucuman 6 1948 p. 238 pl. ii f. 4–5.

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Peronaeus izozoensis sp. nov. Llanos de Izwzo Bolivia p. 3 f. 1; *P. (Lissoacme) reedi* sp. nov. La Cueva prov. Mendoza, Argentina p. 10 f. 6; *P. (Lissoacme) puntanus* sp. nov. Cerro del Morro province of San Luis, Argentina p. 13 f. 8; *P. (L.) torallyi corrugatus* var. nov. Villa Nougues province of Tucuman, Argentina p. 19 f. 9; *P. (L.) torallyi nigrumbilicatus* var. nov. province of Embarcación Salta, Argentina p. 20 f. 10, J. J. PARODIZ Comun. zool. Mus. Hist. nat. Montevideo 2 38 1947; *P. (L.) birabeni* sp. nov. Embarcación, Salta, N.W. Argentina, M. I. H. SCOTT Acta zool. Lillo Tucuman 6 1948 p. 272 f. 4–10.

Placostylus falcicula (Gassies) figured, T. PAIN 669.

Protylptus deletangi sp. nov. p. 3

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Thaumastus (Scholvenia) argentinus sp. nov. Hacienda Ducous 15 kilom. N. of Pique, Depmt. Saavedra, Prov. Buenos Aires, Argentina, J. C. BEQUAERT Nautilus Philad. 1949 62 4 pl. 114 pl. 7 f. 6.

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Bradybaena samboensis montana subsp. nov. suburb of Siroiwa, Korea, T. KURODA & M. MIYANAGA Venus, Mukaisima 12 3–4 1943 pp. 132–138 text-figs. 5–7.

Buliminopsis buliminoides fig., I. TAKI 884.

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PLINGER 431; *H. ridens* Sardinia p. 197; *H. sardonica* Sardinia p. 197. E. v. MARTENS Sitz.-Ber. Naturf. Freunde Berlin 1884; *H. pomatia* on alimentary anatomy, B. ROSEN 773; *H. pisana* spread in Rottneest Island, D. L. SERVENTY 840; *H. pomatia* L. anatome, fig., E. v. SKRAMLIK 850; *H. p. L.* ascorbic acid content, K. WENIG & K. HALACKA 973.

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Mandarina, on its systematic position fig., S. EMURA 236.

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Oreohelix (Radiocentrum) almoloya sp. nov. Rocky cacti and bush covered hillside in the steep foothills of the Sierra de Almoloya within a 5-mile radius N.W. of Cueva Diablo, Mexico, R. J. DRAKE Nautilus Philad. 1949 62 4 p. 110 pl. 8.

Pseudotrichia nov. sub. gen. China and Premorskiland, Russia, I. M. LIKHAREV C. R. Acad. Sci. Moscow N.S. 1949 64 3 p. 417.

Isomeria anestea Peru? p. 99, pl. 6, f. 4-4b: *Isomeria anodonta* Chaupo 6,000 ft. province of Jaen Depmt. of Cajamarca p. 100 pl. 6 f. 3-3a spp. nov. H. A. PILSBRY Nautilus Philad. 1949 62 3.

Tricheulota (Pseudotrichia) shadini spec. nov. Suputinsk game reserve and Yakovlevka river Daubikhe, Russia, I. M. LIKHAREV C. R. Acad. Sci. Moscow N.S. 1949 64 3 p. 417 figs.

Trishoplita optima (Pilsbry) Naut. 15 116 1902 Anatomy, figs., T. HABE 336.

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Ennea porrecta Bery Radjang Klewang, S.E. Borneo sp. nov. E. v. MARTENS Sitz.-Ber. Naturf. Freund. Berlin 1884 p. 198.

Gonaxis sp. and *Edentulina* sp. as enemies of *Achatina*, P. ZUK 1028.

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Rhytida greenwoodi webbi subsp. nov. p. 361 pl. 65 f. 16-17; *R. hadfieldi* sp. nov. p. 362 pl. 65 f. 18-19: from New Zealand, A. W. B. POWELL Rec. Auckland Inst. Mus. 1949 3 6.

Schizoglossa worthyae sp. nov. p. 366 pl. 65 f. 15 text-figs. 1-3, 3a; *S. novoseelandica barrierensis* var. nov. p. 367 pl. 65 f. 14 text-figs. 9, 10, 10a: New Zealand, A. W. B. POWELL Rec. Auckland Inst. Mus. 1949 3 6.

Paryphanta lignaria lusca p. 350 pl. 66 f. 2; *P. l. ruforadiata* p. 353 pl. 64 f. 1-2; *P. rossiana patrickensis* p. 358 pl. 65 f. 10-12; *P. traversi latizona* p. 359 pl. 64 f. 6-8; subsp. nov. New Zealand, A. W. B. POWELL Rec. Auckland Inst. Mus. 1949 3 6.

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†*Nuculoidea opima* (Hall) hinge characters, figs., H. E. VOKES 958.

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†*Solenomya hoahuyhensis* sp. nov. Upper Trias, Hoa-Huynh, S. Annam. E. SAURIN Bull. Surv. Geol. Indochine 26 3 1941 p. 13 pl. ii f. 23-31.

†*Palaeonucula terminalis* sp. nov. Lower Permian, Peru, B. J. CHRONIC in Newell, Chronic & Roberts 'Upper Paleozoic of Peru' 1949 p. 159 pl. 33 f. 4a-7.

ARCACEA

Arca granosa Ca CO₃ content, K. P. PILLAI 709.

†*Arca jauberti* "Matheron nom. nud. 1879" = A. J. Matheron Rech. Paleont. 1879 pl. B-8 f. 7 *Barbatia jauberti* Gillet, Lamell. néoc. 1924 p. 15, A. P. CHARLES Mém. Soc. d'Etudes Paleont. Palethnogr. Provence 1 1 1948 p. 19.

†*Arca (Plagiarca) oblonga* sp. nov. p. 64 fig. 3; *A. dalmatica* p. 64 f. 4; spp. nov. Monte Promina Dalmatia Eocene, O. KÜHN Jahrb. geo. Bundes Arst. Wien 91 1-2 1948.

†*Arca rossii* sp. nov. Maestrichtian. Gola-Gola et Guttar (Libia), V. VIOLA Riv. ital. Paleont. Milano 55 2 1949 p. 80 text-fig.

†*Barbatia wenki* sp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 62 pl. 6 f. 7 a-c.

†*Cucullaea* (? *Macrodon*) *khanhuensis* sp. nov. Upper Trias, Hoa-Huynh, S. Annam, E. SAURIN Bull. Surv. Geol. Indochine 26 3 1941 p. 10 pl. ii f. 22, 23.

†*Cucullaea (Ashcroftia) distorta* sp. nov. Mesozoic (Cretaceous), Kaindi Metamorphic Group, Snake R. 20 m. N. of Wau, Morobe District, New Guinea. M. F. GLAESSNER Mem. Qd. Mus. Brisbane 12 4 1949 p. 170 pl. xiv f. 1-4 text-fig. 3.

†*Idonearca stephensoni* sp. nov. Lower Cretaceous, S.-E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949 p. 63 pl. 8 f. 9-12 pl. 9 f. 1.

†*Macrodon minutus* p. 8 pl. ii f. 11-14; *M. intermedius* p. 9 pl. ii f. 6-7; *M. (? Macrodon tella) brevis* p. 9 pl. ii f. 8-10; *Cucullaea* (? *Macrodon*) *khanhuensis* p. 10 pl. ii f. 22, 23: spp. nov. Upper Trias, E. SAURIN Bull. Surv. Geol. Indochine 26 3 1941.

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†*Gervillia angelini* Lundgren in the Rhaetic at Scania, Sweden, fig., G. TROEDSSON 920.

Modiola modiolus L. experiments as to toxicity and effects of cooking, J. C. MEDCOF & others 594.

†*Modiola adrae* p. 76; *Modiola gronensis* p. 76 spp. nov. Rhaetic, Italy, F. ANELLE Riv. ital. Paleont. Milano 55 2 1949.

Musculus lebourae sp. nov. from the test of the Ascidian *Herdmania pallida* common in the Indian Ocean, K. M. WHITE Proc. Malac. Soc. London 1949 28 1 pp. 46-49 text-figs. and pl. 3 A.

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of feeding, C. B. JØRGENSEN 425; *M. edulis* L. experiments as to toxicity and effect of cooking, J. C. MEDCOF & others 594.

†*Mytilus hoffmanni* Nilsson; *M. minutus* Goldf. in the Rhaetic at Scania, Sweden, figs., G. TROEDSSON 920.

Mytilidonta paulae sp. nov. Lago di Sabautia (Paola), G. BRUNELLI & G. GANNICCI Boll. Pesca Piscicolt Idrobiol. Roma 16 4 1940 p. 47.

Sollea nom. nov. for *Tylophora* Dahmer 1936 non Pavesi 1880 (Arachnidae), G. DAHMER Archiv. f. Molluskenk. Frankfurt-a-M. 1949 78 1/3 p. 100.

PTERIIACEA

†*Avicula annamitica* p. 2 pl. 1 f. 1-6; *A. angusta* p. 2 pl. 1 f. 7-13; *A. carinata* p. 3 pl. 1 f. 14, 15 text-fig. 1: spp. nov. Upper Trias, Hoa-Huynh, South Annam, E. SAURIN Bull. Surv. Geol. Indochine 26 3 1941.

†*Aviculopecten crassispinosus* sp. nov. Lower Permian, Peru, B. J. CHRONIC in Newell, Chronic & Roberts 'Upper Paleozoic of Peru' 1949 p. 163 pl. 33 f. 10-13b.

Aviculopectinidae evolution, H. & G. TERMIER 902.

†*Cassianella minuta* sp. nov. Upper Trias, Hoa-Huynh, S. Annam, E. SAURIN Bull. Surv. Geol. Indochine 26 3 1941 p. 4 pl. 1 f. 21.

†*Conocardium pomachacanum* sp. nov. Middle Pennsylvanian, Peru, B. J. CHRONIC in Newell, Chronic & Roberts 'Upper Paleozoic of Peru' 1949 p. 161 pl. 30 f. 8 a-c.

†*Dipterophora girardi* sp. nov. Devonian, Brest-Laval Syncline, A. RENAUD Mem. Soc. Géol. Min. Bretagne 7 2 1942 p. 204 pl. x f. 8.

†*Entomotis kurosawai* sp. nov. Upper Trias, Kitakami mountain land, Japan, G. SEKAGUTI Jubilee Publ. Comm. Pref. H. Yabe 1 1939 p. 229 pl. 15 f. 1-6.

†*Inoceramus costellatus* Wood (Cretaceous), figs., B. ZAHÁLKA 1020.

†*Gervillia heinemani* p. 64 pl. 9 f. 6-7; *G. cholla* p. 64 pl. 10 f. 1; *G. rasori* p. 65 pl. 10 f. 2, 3: spp. nov. Lower Cretaceous S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949.

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†*Myalima* (*Plethomytilus*) nov. sp. Lower Devonian, Coblenz, G. DAHMER Senckenbergiana 29 1-6 1949 p. 123 f. 4.

Pinctada martensi (Dkr.) and rhythmic activity as regard pearl formation, S. MORI 634; *P. martensi* (Dkr.) respiration, G. MORI 635; *P. hinge*, fig., H. & G. TERMIER 902.

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†*Pinnigena* a supposed new species from Mexico, F. K. G. MULLERIED 639.

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†*Pteria peregrina* sp. nov. Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949 p. 65 pl. 9 f. 5.

Pseudomonotis hinge, fig., H. & G. TERMIER 902.

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Amusium concentricum cornutum subsp. nov. Carboniferous, Bohrang Strzyżów, M. SCHWARZBACH Palaeontographica Stuttgart A47 1-3 p. 57 text-figs. 50, 51.

†*Amusium* (*Pseudentolium*) *borneum* sp. nov. Neogene, Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 2 p. 64 pl. 6 f. 10 a-b.

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†*Lima* (*Mantellum*) *tadinii* sp. nov. Rhaetic, Lombardy, C. CHIESA Riv. ital. Paleont. Milan 55 1 1949 p. 29 pl. iii f. 2.

†*Lima espinal* p. 92 pl. 9 f. 8; *L. cholla* p. 93 pl. 9 f. 3-4; *L. muralensis*

p. 93 pl. 9 f. 2: *sp. nov.* Lower Cretaceous, S. E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 33 1949.

†*Lima konnoi* *sp. nov.* Siroyama sandstone, Kanbara town, Sizuoka Prefecture, Japan, Neogene, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 p. 10 pl. 1 f. 8.

†*Lima subrigida* Roem., figs., K. B. PETKOVIC 692.

†*Lima astartoides* *sp. nov.* Upper Trias. Hoa-Huynh, S. Annam, E. SAKRIN Bull. Surv. Geol. Indochine 26 3 1941 p. 6 pl. 1 f. 32-37.

Limatula falklandica A. Ad. 1863 a synonym of *Lima (Limatula) pygmaea* Philippi 1845, fig., A. CARCELLES 136.

†*Limipecten araneosus* *sp. nov.* Middle Pennsylvanian, Peru, B. J. CHRONIC in Newell, Chronic & Roberts 'Upper Paleozoic of Peru' 1949 p. 164 pl. 31 f. 1a-2.

†*Neithea vicinalis* *sp. nov.* Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 33 1949 p. 91 pl. 11 f. 6-7.

Pachypteria geovini hinge, figs., H. & G. TERMIER 902.

†*Patinopecten kanbaraensis* *sp. nov.* Neogene Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 p. 3 pl. 1 f. 3.

Pecten irradians and *P. magellanicus* as source of food in New England, R. L. CARSON 133; *P. grandis* Solander experiments as to toxicity and effect of cooking, J. C. MEDCOF & others 594; *P. fertilization*, F. G. V. MEDEN 596.

†*Pecten (Chlamys) thompsoni* *sp. nov.* Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 33 1949 p. 90 pl. 16 f. 5-8 pl. 17 f. 1.

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Plicatula spondyloidea (Meuschen), figured, A. CARCELLES 136.

†*Propeamussium felsineum puncticillatum* *var. nov.* Pliocene [nom. nud.], G. RUGGIERI 785.

†*Pseudamussium condrustine orientale* *subsp. nov.* Carboniferous, Bohrung, Strzyzow, M. SCHWARZBACH Palaeontographica Stuttgart A97 1-3 1949 p. 58 pl. iii 10 text-fig. 52.

Spondylus hinge, fig., H. & G. TERMIER 902.

†*Spondylus subserratus pluricostatus* *var. nov.* Cretaceous, Migjur Cinia, East Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (N.S. 16) 1949 p. 3 pl. 1 f. 1.

†*Syncyclonema sowerbyi infossa* *subsp. nov.* Upper Carboniferous, Bohrung, Strzyzów, M. SCHWARZBACH Palaeontographica Stuttgart A97 1-3 p. 56 pl. iii f. 8-9.

ANOMIACEA

†*Prismatro* *subgen. nov.* of *Patro* [sub]genotype *Anomia undata* Hutton Pliocene, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6, 18 pl. 1 f. 1, 2, 5, 10. 581.

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Exogyra virgula new observations, D. AUBERT 35.

†*Exogyra lancha* *sp. nov.* Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 33 1949 p. 66 pl. 10 f. 4-6; *E. coquandi* *sp. nov.* Hauterivian Massif d'Allauch, R. P. CHARLES Mem. Soc. d'Etudes Paleont. Paletanogr. Provence 11 1948 p. 14 pl. 1.

Gryphaea angulata Lk. the type of the genus, G. RANSON 736; *G. margaritacea* (Lmk.) Cape of Good Hope [Mus. N.H. Paris], G. RANSON 737; *G. angulata* Lk. biological notes, G. RANSON 739.

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†*Ostrea* (*Cubitostrea*) *dubertreti* sp. nov. F. ROMAN Notes Mém. Haut-Comm. Republ. Franc. Syrie et Au Liban 3 1940 p. 394 text-fig. 6 pl. v f. 3-10; *O. edwilsoni* sp. nov. Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949 p. 66 pl. II f. 1-3; *O. gajensis* Chatterjee [sp. nov.?] from limestone bed near bank of Burabalang R. near Baripada, S. C. CHATTERJEE Proc. Indian Sci. Congr. 1946 32nd 3 p. 55; *O. bellovacensis* in the Lower Eocene, Dieppe, L. FERGUEUR 247.

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†*Arconaia hosonoi* sp. nov. Coal-bearing Tertiary, Mie-ken, Japan, K. SUZUKI & K. OYAMA Jap. J. Malac. 15 1/4 1948 pp. 38, 42 text-figs. 3-5.

†*Cristaria sasai* sp. nov. Isikari group, Japan, K. SUZUKI Jap. J. Malac. 15 1/4 1948 p. 45 text-figs. 878; *C. kuboii* sp. nov. coal-bearing Tertiary, Japan, K. SUZUKI & K. OYAMA Jap. J. Malac. 15 1/4 1948 pp. 38, 41 text-figs. 1, 2; *C. plicata* fig., J. TAKI 884.

Gonidea angulata (Lea) in California, Oregon and Washington, figs., W. M. INGRAM 393.

†*Hefteria* subgen. nov. of *Myophoria* [sub]genotype *Cardinia carinata* Roemer 1855, other spp. included are *peregrina* Beush. and *circumcincta* Fuchs, G. DAHMER Senckenb. Frankfurt 29 1-6 1949 p. 125.

Hyriopsis cumingi fig., I. TAKI 884.

Lamellidens marginalis mature in just over two years, fishes as the hosts of Glochidia; breeding and parasitism, R. V. SESHAIYA 841. *Lamellidens marginalis* contains an enzyme destructive to Vitamin B1, K. K. REDDI, K. V. GIRI & R. DAS 777.

Lanceolaria grayana, fig., I. TAKI 884.

Obovaria depygis (Conrad) notes on lost type, R. I. JOHNSON 419.

Quadrula (*Quincuncina*) *guadalupensis* sp. nov. Guadalupe River above Seguin between Routes 123 and 90, Guadalupe Co., Texas, type Acad. N. Sci. Philad.. C. B. WURTZ Natulae Naturae. Philad. 1950 224 p. 2 figs. 1-5.

Unionidae of the Upper Mackinaw River, Illinois, G. A. BRAUN & G. I. DYKASTRA 112; *U.* of French West Africa, A. FRANC 273; *U.*—a natural system of classification, H. MODELL 624.

TRIGONIACEA

†*Myophoria annamitica* sp. nov. Upper Trias, Hoa-Huynh, South Annam, E. SAURIN Bull. Surv. Geol. Indochine 26 3 1941 p. 10 pl. ii f. 16-20; *M. goldfussi* Alb. Middle Keuper of Lorraine, P. L. MAUBEUGE 591.

†*Schizodus obscurus* Sow., fig., K. GROSS 315.

†*Trigonia* (*Acanthotrigonia*) *phyllitica* sp. nov. Mesozoic Cretaceous, Kaindi Metamorphic group, Snake R., 20 m. N. of Waw, Morobe District, New Guinea, M. F. GLAESSNEA Mem. Qd. Mus. Brisbane 12 4 1949 p. 172 pl. xv f. 7, 8; *T. maloneana* nom. nov. for *T. vyschetskii* Cragin (part) 1905 p. 74; *T. guildi* p. 75 pl. 12 f. 1-2; *T. resoluta* p. 76 pl. 12 f. 3; *T. suavedra* p. 78 pl. 13 f. 5; *T. mearnsi* p. 78 pl. 12 f. 5, 6 pl. 13 f. 1-4; *T. cragini* p. 80 pl. 13 f. 6-10 pl. 14 f. 3; *T. kitchini* p. 82 pl. 14 f. 4-10; *T. reesidei* p. 83 pl. 14 f. 11-14 pl. 15 f. 1-3; *T. weaveri* p. 87 pl. 15 f. 4-8: spp. nov. Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949.

ASTARTACEA

†*Astarte adkinsi* sp. nov. Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949 p. 93 pl. 15 f. 12-14.

†*Astartella* ? *cavernata* sp. nov. Lower Permian, Peru, B. T. CHRONIC in Newell, Cronin & Roberts 'Upper Paleozoic of Peru' 1949 p. 170 pl. 34 f. 5a-7.

†Astartidae, Plio-Pleistocene of "Zeeuwse Stranden," A. N. CH. TEN BROEK 116.

†*Crassatella dainellii* sp. nov. Monte Promina, Dalmatia, Eocene, O. KERN Jahrb. Geol. Bundes-Anst. Wien 91 1-2 1948 p. 67 pl. 1 f. 6.

CARDITACEA

†*Cardita smanensis* sp. nov., F. ROMAN Notes Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 358 pl. 1 f. 10, 10a.

SPHAERIACEA

†*Batissa muratai* sp. nov. Palaeogene, Isikari coalfield, Hokkaido, T. NAGAO & H. ÔTATUME J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943 p. 1; *B. nisikawai* sp. nov. Tertiary, Upper course of Tan-un-naisawa, Tesio Province, Hokkaido, K. ÔTATUME J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943 pp. 15, 17 text-fig. 1-3; *B. sakakibarai* sp. nov. Tertiary of Karakuto, K. ÔTATUME J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943 pp. 21, 24 pl. iv f. 1-6.

Corbicula, Korean species of the genus, figs., K. OYAMA 665; *C.*, East Asia, K. SUZUKI & K. OYAMA 880.

†*Corbicula sunagawaensis* sp. nov. Palaeogene, Isikari Coalfield, Hokkaido, T. NAGAO & K. ÔTATUME, J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943 pp. 1, 9 pl. iii f. 10, 10a; *C. fluminalis* Müll. in the Pleistocene, Macedonia, S. PAVLOVIĆ 684; *C. hukuyai* sp. nov. Tertiary of Karahuto, H. ÔTATUME J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943 pp. 21, 26 pl. iv f. 10-17; *C. elchaensis* sp. nov. Miocene, Mendoza, C. RUSCONI Rev. Mus. Hist. nat. Mendoza 1949 3 4 p. 238 figs.; *C. shimizui* pp. 161, 166 pl. 7, pl. 8 f. 4, 7; *C. sachalinensis* pp. 163, 167 pl. 8 f. 1-3, 5, 6: spp. nov. Tertiary, Sachalin Id., K. SUZUKI Venus Tokyo 12 3-4 1943.

†*Cyrena cuneiformis* in the Lower Eocene, Dieppe, L. FERGUEUR 247.

Pisidium clessini Neumayr 1875 (non Surbeck 1899) = *P. astartoides*, A. E. ELLIS 233; *P. pseudosphaerium* Favre and its occurrence in England, figures showing difference between *P. p.* and *P. milium* Held., J. G. J. KUTPER 484.

†*Polymesoda* (*Geloina*) *hokkaidoensis* sp. nov. pp. 1, 2 pls. i, ii; *P. (G.) h. bibaiensis* var. nov. pp. 1, 4. pl. 1 f. 5; *P. (G.) takaoi* sp. nov. pp. 1, 5. pl. ii, iii. Palaeogene, Isikari Coalfield, Hokkaido, T. NAGAO & K. ÔTATUME J. Fac. Sci. Hokkaido Univ. Geol. Min. 4 7 1 1943.

Sphaerium pallidum Gray = *S. transversum* Say, A. E. ELLIS 233.

Venerupis philippinarum Ad. & Rve. a review, K. MURASE 641.

ISOCARDIACEA

†*Isocardia superturgida* sp. nov. Pliocene, S. Italy p. 188 pl. xvi f. 1, 2, *I. buendinensis* sp. nov. Upper Oligocene, Dusseldorf p. 191 pl. xvii f. 1, 2; C. C. BERINGER Palaeontographica Stuttgart A97 4-6 1949.

CYPRINACEA

Akebiconcha [sole sp. genotype] *kawamurai* gen. et sp. nov. Arcticidae = Cyprinidae dredged off the coast of Odawara, Prov. Sagami, in 100 fms. (approx.) by Mr. Ryôsuke Kawamura. T. KURODA Venus Jap. J. Malac. Mukaisima 13 1-4 1943 p. 17 figs. 1-3.

Plesiocyprina phidius Orb. Basel. fig., E. KOECKLIN 466.

DREISSENACEA

Congeria praeornithopsis 'n. sp.' [nom. nud. here], A. PAPP 673.

†*Mytilopsis allyneana* sp. nov. p. 14 pl. 4 f. 5-8 Fiji Ids.; *M. zeteki* sp. nov. p. 15 pl. 4 f. 1-4 Conozoic, Panama area, HERTLEIN & HANNA Bull. S. Calif. Acad. Sci. 48 1 1949.

LUCINACEA

†*Joannisiella takeyamae* sp. nov. Miocene, Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1, 2 pp. 22, 29 pl. iv f. 32-34, 37.

†*Dilora* gen. nov. Lucinidae, genotype *D. lorea* sp. nov. Pliocene, Ōtauhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6, 19 pl. 1 f. 6, 7, 11.

Divaricella divaricata (L.) in Scilly. T. G. W. FOWLER 269.

ERYCINACEA

Devonia ohshimai sp. nov. commensal on *Leptosynapta ooplax*, Vagura, Isigaki Island, Yaeyama Group, Ryūkyū, Japan, T. KAWAHARA Venus Mukaisima 11 4 p. 153, 159 f. 1, 2 pl. 3 f. 1-7.

CHAMACEA

†*Arnaudia* Bayle notes on the genus, O. KÜHN 481.

†*Bournonia hardagica* sp. nov. Cretaceous, Migiurtinia, E. Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (n.s. 16) 1949 p. 16 pl. ii f. 7; *B. excavata* Orb. notes on the paleobiology of the genus, C. DECHASEAUX 202.

†*Dechaseauxia* gen. nov. Radiolitidae, genotype *Dechaseauxia costata* sp. nov. Cretaceous, Migiurtinia, E. Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (n.s. 16) 1949 pl. ii f. 1, pl. iii f. 3.

†*Durania niobrarenensis* sp. nov. Niobrara formation Upper Cretaceous, Colorado, M. O. GRIFFITHS J. Paleont. Menasha Wis. 23 5 1949 p. 471 pl. 79; *D. agriaformis* p. 18 pl. ii f. 4; *D. (?) inornata* p. 19 pl. i f. 6, pl. iv f. 12: spp. nov. Cretaceous, Migiurtinia, E. Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (n.s. 16) 1949.

†*Hardaghia* gen. nov. Radiolitidae, genotype *Hardaghia quadrata* sp. nov. Cretaceous, Migiurtinia, E. Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (n.s. 16) 1949 p. 19 pl. iii f. 1, 2.

†*Hardaghia quadrata aplicata* var. nov. Cretaceous, Migiurtinia, E. Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (n.s. 16) 1949 p. 21 pl. ii f. 6.

Hippurites structure and function, text-figs., B. MILOVANOVIC 616.

†*Hippurites* (*Vaccinites*) *arenensis* sp. nov. Vol d'Aren ar Beausset, O. KÜHN N. Jahrb. Min. Geol. Paläont. Stuttgart 89 1-2 1945 p. 176; *H. gaudryi* Man-Chalmar is referred to a var. of *H. (Vaccinites) cornavaccinum* Brown p. 180, O. KÜHN 477; *H. inaequicostatus carpathica* var. nov. p. 459 text-fig. 1; *H. carinthiacus recivalis* var. nov. p. 461 text-fig. 2 West Carpathians, O. KÜHN & ANDRUSOV N. Jahrb. Min. Geol. Paläont. Stuttgart 86 3 1942; *H. (Hippuritella) somalicus* sp. nov. Cretaceous, Migiurtinia, E. Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (n.s. 16) 1949 p. 14 pl. iv f. 6.

†*Hippurites radiosus* des Moulins a noticeable occurrence, C. DECHASEAUX & M. CASALIS 203.

Toucasia 'siphonal bands,' C. DECHASEAUX 208.

†*Praeradiolites boucheroni strobilus* var. nov. Cretaceous, Migiurtinia, E. Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (n.s. 16) 1949 p. 15 pl. i f. 2, pl. ii f. 3, pl. iv f. 5.

†*Pseudovaccinites aequi* Sénésse 1947, P. SÉNÉSSE 839.

†*Radiolitella secunda* sp. nov. West Carpathians, O. KÜHN & D. ANDRUSOV N. Jahrb. Min. Geol. Paläont Stuttgart 86 3 1942 p. 463 fig. 4. *Radiolites*, O. KÜHN 476.

†*Requienia*—siphonal bands, C. DECHASEAUX 208.

Rudistes of the Coniacian of Uchaux and Céze, G. MENNISSIER 603.

†*Sauragesia somalica* p. 17 pl. i f. 4, pl. iv f. 4; *S. attenuata* p. 17 pl. i f. 8, 9, pl. ii f. 2, pl. iv f. 11: spp. nov. Cretaceous Migiurtinia, E. Africa, G. TAVANI Palaeontogr. ital. Pisa 46 (n.s. 16) 1949.

CARDIACEA

†*Arcicardium primigenium* [sp. nov.?] Pontic of Servia, EBERZIN & STEVANOVIĆ Bull. Mus. H.N. Serb. 2 1949 pp. 149, 156 pl. xviii f. 1-2; *A.*—as the oldest representative of the genus, A. G. EBERZIN & P. M. STEVANOVIĆ 230.

Cardium edule—a general review of the species and its occurrence, L. LAMBERT 522; *C. muticum* Rve., the Veligers and young shells, figs., H. YOSIDA 1016.

†*Cardium* (*Cerastoderma*) *bengasiensis antiqua* Agheila (Syste) gleich sudlich Via Balbia p. 18; *C. (C.) b. hatyi* p. 19 pl. 1 f. 9–10, pl. 2 f. 11 Sebecka di Punta bei Bengasi (Cyrenaika); *C. (C.) b. berkaensis* Berka bei Bengasi p. 19 pl. 1 f. 5–8; *C. (C.) coëfensis cyrenaica* Sebecka Ain es Selamic bei Bengasie (Cyrenaika) p. 21 pl. 2 f. 16; *C. (C.) c. heilmeiri* Sebecka n. Str. Bengasi-Benina (Cyrenaika) p. 21 pl. 2 f. 17; **subsp. nov.** *C. (Cerastoderma) agheilensis* sp. nov. 22 Km. W. Agheila (Syrte), S. der Via Balbia, N.E. Africa, H. KALTENBACH Arch. f. Malak 78 1/3 1949 78 1/3; *C. (Bucardium) ogurai* sp. nov. Miocene, Tyūgoku, Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1–2 pp. 22, 28 pl. 1 f. 1 I. 8; *C. martellii subtruncata* var. nov. Maestrichtian Gara Soetsøel, Uadi Sofeggin, Lybia, V. VIOLA Riv. ital. Paleont. Milano 55 2 1949 p. 83 text-fig.; *C. latisulcum neringense* 'n. sp.'; *C. gleichenbergense* 'n. sp.'; *C. vindobonense breviformis* 'n. sp.'; *C. vindobonense jekeliusi* 'n. sp.'; *C. fischeriformis* 'n. sp.'; *C. janoscheki* 'n. sp.'; *C. donginki praeformis* 'n. sp.' [all nomm. nud. here], A. PAPP 673.

Hippopus shell and pearl structure, A. REYNE 762.

†*Replidacna similifitoni* 'n. sp.'; *R. pseudopositioanci* 'n. sp.'; *R. planaecarinata* 'n. sp.'; *R. jekeliusi* 'n. sp.'; *R. pseudodeserta* 'n. sp.' [nomm. nud. here] Maestrichtian, Sar-mat, A. PAPP 673.

Tridacna shell and pearl structure, A. REYNE 762.

VENERACEA

†*Bassina katherinae* sp. nov. Pliocene, Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. 16 1948 pp. 2, 24 pl. 4 f. 5, 6, 8.

Chione (*Chione*) *guatulcoensis* sp. nov. off Port Guatulco, Mexico, Eastern Pacific Expedition, New York Zool. Soc., L. G. HERTLEIN & A. M. STRONG Zoologica N.Y. 33 4 1948 p. 182 pl. 1 f. 2, 4, 6, 10, pl. ii f. 1, 8, 12, 13.

†*Chione* (*Austrovenus*) *tamakiensis* sp., nov. Pliocene, Otahuku, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6 24 pl. 4 f. 1–4; *C. (C.) californiensis peabodyi* var. nov. Pleistocene, Santa Barbara Co., Pliocene and Pleistocene, Gulf Calif. and Galapagos Ids. p. 581 pl. 90 f. 1, 5, 11; *C. (Anomalocardia) hannai* ex Bramwamp MSS. Lower Pliocene p. 585 pl. 92 f. 14, P. PARKER J. Paleont. Menasha Wis. 23 6 1949; *C. (C.) californiensis gealeyi* var. nov. p. 580 pl. 89 f. 13 pl. 90 f. 7–10. Pt. Conception to Guaymas, G. of California; *C. (C.) c. durhami* var. nov. San Pedro, Calif. to Panama, occurs in Pliocene and Pleistocene. also p. 581 pl. 90 f. 3; *C. (C.) undatella tabari* var. nov. G. of California p. 581 pl. 90 f. 2, 4, 9, P. PARKER J. Paleont. Menasha Wis. 23 6 1949.

Clementia nakamurai sp. nov. p. 14 pl. i f. 7, 11; *C. n. kuretiensis* subsp. nov. p. 15 pl. ii f. 4. Neogene Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1948 5 1–2.

†*Dosinia matumotoi* sp. nov. Neogene Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 I 1–2 p. 11 pl. i f. 10; *D. suketoensis* sp. nov. Miocene Tyūgoku Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1–2 p. 22 31 pl. i f. 6, 7, 9; *D. (Raina) powelli* sp. nov. Pliocene Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6, 24 pl. 4 f. 7, 10.

†*Eumarcia* (*Opimarcia*) *healyis* subgen. et sp. nov. Pliocene Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 16, 26 pl. 5 f. 1, 2, 4.

†*Gouldia pryori* sp. nov. Neogene Dent Peninsula, British North Borneo, L. R. COX Schweiz. Palaeont. Abh. 66 (1948–9) 1948 No. 2 p. 66 pl. 6 f. 12 a–b.

Gnidiella subgen. nov. of *Chione* subgenotype *Venus gnidea* Brod. and Sow. subgenus includes *Venus amathusia* Philippi 1844 Abb. Besch. Conchyl. I. p. 139 f. 4; *Venus pulicaria* Brod., P.Z.S. 1835 p. 44; †*Chione richthofeni* H. & S. 1927 Lower Miocene; †*C. simplicata* Nomland 1917 Miocene; †*Venus (C.) temblorensis* Anderson 1905 Miocene, P. PARKER J. Paleont. Menasha Wis. 23 6 1949.

†*Katelsysia* (*Nipponomaria*) *nakamura* subgen. et sp. nov. vide *Nipponomaria*, N. IKEBE *Venus Mukaisima* 11 2/3 1941 p. 50.

†*Meretrix arugai* sp. nov. Miocene Tyūgoku, Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 pp. 22 30 pl. ii f. 11-12.

Mysia undata (Pennant) note on the hinge dentition, J. E. G. RAYMONT 752.

Nioche subgen. nov. of *Chione* subgenotype *Venus asperirma* Sowerby Thes. Conch. 2. 1853 p. 714 pl. 155 f. 57-58 Eastern Pacific Expedition New York Zool. Soc., L. G. HERTLEIN & A. M. STRONG *Zoologica N.Y.* 33 4 1948 p. 186.

†*Nipponomarcia* subgen. nov. of *Katelsysia* subgenotype *Nipponomarcia nakamura* sp. nov. Miocene Japan, N. IKEBE *Venus Mukaisima* 11 2-3 1941 p. 50.

†*Opimarcia* subgen. nov. of *Eumarcia* subgenotype *E. (O.) healyi* Pliocene N.Z., J. MARWICK *Palaeont. Bull. N.Z.* 16 1048 pp. 16 26 pl. 5 f. 1, 2, 4.

Paphia hirabayasii sp. nov. Siro-yama sandstone Kaubara town Siyuoka Prefecture, Japan, Neogene, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 p. 12 pl. 1 f. 9, pl. ii f. 16, 19; *P. pullastra* (Montagu) movements in process of digging, D. B. QUAYLE 729; *P. vide etiam Tapes*, E. F. GALIANO 293.

Pitar (*Pitarella*) *mexicanus* sp. nov. 4 m. S.S.W. of Maldonado Point, Mexico p. 171 pl. 1 f. 3, 8; *P. (Hyphantosoma) aletes* sp. nov. Arena Bank, G. of California p. 172 pl. 1 f. 9, 11, 12, 13; *P. (Lamelliconcha) frizzel* i Arena Bank p. 176 pl. 1 f. 1, 5, 7, pl. ii f. 11, L. G. HERTLEIN & A. M. STRONG *Zoologica New York* 33 4 1948.

†*Securella* gen. nov. Veneridae p. 587 genotype *Venus securis* Shumard 1858 Pliocene, P. PARKER J. Paleont. Menasha Wis. 23 6 1949 pp. 587-593 pl. 94 f. 8, 12, 19, pl. 95 f. 6.

Tapes decussatus L. bifurcated siphon, H. BOUXIN 109; *T. d.* L. Muscular system and adductor muscles and anatomy, figs., E. F. GALIANO 293.

†*Tawena duobrunnea* sp. nov. Pliocene Otakuhu, Auckland, N.Z., J. MARWICK *Palaeont. Bull. N.Z.* 16 1948 pp. 6 25 p. 2 f. 2, 3, 5, 6.

Veneridae, Provitamin D in Clams, H. R. ROSENBERG 775.

Venerupis philippinarum experiments on air temperatures and effects, H. KURASIGE 486; *V. p.* lethal air temperatures in exposure, H. KURASIGE 487; *V. p.* Ad. & Rve. variation in colour pattern and bilateral asymmetry, I. TAKI 887.

Venus mercenaria spawning behaviour, H. H. HASKIN 350; *V. m.* action of Choline and related compounds on the heart, J. H. WELSH & R. TAUB 972.

MACTRACEA

†*Crassula* subgen. nov. of *Macra* [sub]genotype *Macra aequilateralis* Deshayes, J. MARWICK *Palaeont. Bull. N.Z.* 16 1948 p. 23.

Macra solida the host of a new parasite *Proboscidosaccus enigmaticus* figs., L. GALLIEN 295; *M. solidissima* Dln. experiments as to toxicity and effects of cooking, J. G. MEDCOF & others 594; *M. s.* Fertilizin from eggs, E. D. METZ & J. E. DONOVAN 608; *M. s.* Dln. Amino acids content, J. L. NOLAN 649.

†*Macra solida* f. *typica* at Varberg fig., R. HÄGG 342; *M. (Cyclomacra) williamsi* pp. 6 42 pl. 3 f. 6-8; *M. (Macrula) mula* pp. 6 22 pl. 3 f. 1-2 spp. nov. Pliocene Otakuhu, Auckland, N.Z., J. MARWICK *Palaeont. Bull. N.Z.* 16 1948.

†*Macrula* subgen. nov. of *Macra* subgenotype *M. (M.) mula* sp. nov. Pliocene Otakuhu, Auckland, N.Z. J. MARWICK *Paleont. Bull. N.Z.* 16 1948 pp. 6 22 pl. 3 f. 1-2.

Notochione subgen. of *Chione* subgenotype *Venus columbiensis* Sowerby (Conch. Icon. 14 *Venus* 1863 sp. 61 pl. 15 f. 61 a-b type locality Santa Elena, Ecuador, at low water in coarse sand range Mazatlan, Mexico to Pacasmayo, Peru, Eastern Pacific Expedition New York Zool. Soc., W. G. HERTLEIN & A. M. STRONG *Zoologica N.Y.* 33 4 1948 p. 188.

Paphomotia subgen. nov. of *Irus* subgenotype *Petricola elliptica* Sowerby 1834 Eastern Pacific Expedition New York Zool. Soc., L. G. HERTLEIN & A. M. STRONG *Zoologica N.Y.* 33 4 1948 p. 192.

Petricola (Petricola) lucasana sp. nov. Cape San Lucas, Lower California, Eastern Pacific Expedition New York Zool. Soc., L. G. HERTLEIN & A. M. STRONG Zoologica New York 33 4 1948 p. 194 pl. ii f. 4, 9.

†*Spisula (Spisulona) coulti* subgen. et sp. nov. Pliocene Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6 23 pl. 3 f. 3-5, 9-10.

†*Spisulona* [non *Spisulina* P. Fischer] subgen. nov. of *Spisula* [sub]genotype *Macra crassilesta* Finlay Pliocene N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6 22.

†*Zeratia flemingi* sp. nov. Pliocene Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6, 23 pl. 2 f. 1, 4, 12.

TELLINACEA

Abra abra general structure, habits and adaptations, figs., C. M. YONGE 1015.

†*Burtinella libyca* sp. nov. and *B. l. ornata* var. nov. lower Maestrichtian Uadi Sofeggin Tripolitania, A. M. MACCAGNO Boll. uff. geol. Ital. 69 1946 pp. 151-157 plate.

Donax vittatus general structures, habits, and adaptations figs., C. M. YONGE 1015.

Gari tellinella, *G. fervensis* general structure, habits and adaptations, figs., C. M. YONGE 1015.

†*Gari aucklandica* sp. nov. Pliocene Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pp. 6, 26 pl. 1 f. 8, 9, 12.

Macoma (Psammacoma) panamensis spectri subsp. nov. Holotype a left valve, Paratype a right valve, Santa Inez Bay, G. of California, L. G. HERTLEIN & A. M. STRONG Zoologica, New York 34 2, 9 1949 pp. 63 91 pl. 1 f. 9, 10, 16; *M. balthica* general structure, habits and adaptations, figs., C. M. YONGE 1015.

Phyllodella subgen. nov. of *Tellina* sole sp. *T. (P.) insculpta* Hanley, L. G. HERTLEIN & A. M. STRONG Zoologica New York 34 2, 9 1949 pp. 63, 87.

†*Psammobia labordei sarmatica* 'n. sp.' [nom. nud. here] A. PAPP 673.

Scrobicularia plana general structures, habits, and adaptations, figs., C. M. YONGE 1015.

Semele craneana sp. nov. Holotype a left valve dredged in the Gulf of California, L. G. HERTLEIN & A. M. STRONG Zoologica New York 34 4, 19 1949 pp. 239 241.

Solecurtis chamasolen (antiquatus), *S. scopula (candidus)* general structure, habits and adaptations, figs., C. M. YONGE 1015.

†*Soletellina waitemata* sp. nov. Pliocene Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 6 26 pl. 1 f. 3-4.

Tellina (Tellinella) zacae pp. 63, 65 pl. 1 f. 12, 13, 17 Arena Bank, Gulf of California; *T. (Moerella) arenica* pp. 63, 68 pl. 1 f. 5, 11 = *T. carpenteri* Dall 1918 (non Dall 1903) Arena Bank; *T. (Moerella) recurvata* pp. 63, 71 pl. 1 f. 2-4, 8 = *recurva* Dall 1900 (non Desh. 1855) San Luis, Gonzales Bay, G. of California; *T. (Merisca) proclivis* pp. 63, 83 pl. 1 f. 6, 7, 14 = *declivis* Sow. 1868 (non Conrad 1834) Magdalena Bay, Lower California; *T. (Scissula) nicoyana* pp. 63, 85 pl. 1 f. 23-26 Ballena Bay, G. of Nicoya, Costa Rica spp. nov. L. G. HERTLEIN & A. M. STRONG Zoologica New York 34 2, 9 1949; *T. tenuis* ligament figs. graphs., E. R. TRUEMAN 922; *T. magna* recorded from Orkney, F. T. WALKER 962; *T. tenuis* general structure, habits and adaptations, figs., C. M. YONGE 1015.

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†*Zozia uetanii* sp. nov. Pliocene Tyūgoku, Japan, Y. OTUKA J. Fac. Sci. Imp. Univ. Tokyo Geol. 1938 5 1-2 pp. 22, 34 pl. ii f. 16.

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†*Laternula synthetica* sp. nov. Pliocene Otahuhu, Auckland, N.Z., J. MARWICK Palaeont. Bull. N.Z. 16 1948 pl. 6 f. 13-15.

†*Pholadomya desioi* sp. nov. Rhaetic Lombardy, C. CHIARA Riv. ital. Paleont. Milan 55 1 1949 p. 30 pl. iii f. 7-9.

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†*Cuspidaria latecuspidata* sp. nov. Upper Trias Hoa-Huynh, South Annam, E. SAURIN Bull. Surv. Geol. Indochine 26 3 1941 p. 15 pl. ii f. 38-47.

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†*Aturoidea distans* Teichert in the Eocene of Victoria figs. 1-2, C. TEICHERT 897.

†*Brittsoceras* gen. nov. Nautilacea p. 603 genotype *B. ornatissemum* sp. nov. Lower Mississippian Chouteau, Lime-

stone Missouri p. 604 pl. 97 f. 1-3, MILLER & others J. Paleont. Menasha Wis. 23 6 1949.

†*Deltoidonautilus bakeri* sp. nov. Phosphate nodule deposit in the Clifton beds forming the base of the Heytesbury formation, near Princetown, S. coast of Western Victoria, C. TEICHERT J. Min. Geol. Dept. Mines Victoria 3 2 1947 p. 48 figs. 1-3.

†*Discoceras?* sp. from the Lower Ordovician of Victoria = *Monograptus* sp. R. A. KEBLE Mem. Nat. Mus. Melbourne 10 1936 p. 121-122 pl. xviii, D. E. THOMAS & C. TEICHERT J. Min. Geol. Dept. Mines Victoria 3 1 1947 p. 50 text-figs.

†*Domatoceratidae* fam. nov. for *Domatoceras*, *Pselioceras*, *Stearoceras*, *Stenopoceras*, and *Titanoceras* (all of Hyatt), MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 41.

†*Endolobus renfroae* sp. nov. Permian Texas, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 40 pl. 46 f. 1-2. *E. occidentis* sp. nov. White Pine Shales, Snakes Range, Nevada, W. YOUNGQUIST J. Paleont. Menasha Wis. 23 3 1949 p. 287 pl. 57 f. 13-14.

†*Endostokesoceras* subgen. nov. p. 509 of *Endodiscosorus* genotype *Endodiscosorus* (*Endostokesoceras*) *eifliensis* sp. nov. p. 510 Devonian, Germany, O. H. SCHINDEWOLF Jahrb. Reichs. Bodenforsch. Berlin 62 1944 figs. on pl. 34-42.

†*Ephippioceratidae* fam. nov. for *Ephippioceras* and *Megaglossoceras*, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 128.

†*Eutrophoceras victorianum* (Teichert) in the Eocene of Victoria figs. 5-7, C. TEICHERT 897.

†*Foordiceras ornatissimum* sp. nov. Permian Texas, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 102 pl. 46 f. 3-5.

†*Knightoceras hempae* sp. nov. Permian Texas, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 38 pl. 16 f. 1, pl. 55 f. 1, pl. 58 f. 1-2.

†*Liroceratidae* nom. nov. for *Coloceratidae* Hyatt—*Coloceras* Hyatt = ? *Lioceras* Teichert, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 119.

†*Metacoceras baylorense* p. 105 pl. 43 f. 1-2, pl. 44 f. 1; *M. bituberculatum* p. 106 pl. 49 f. 3-4, spp. nov. Texas; *M. unklesbayi* nom. nov. for *biseriatum*, Miller & Unklesbay 1942 not of Miller & Owen 1934 = a Pennsylvanian sp. p. 114 pl. 19 f. 1: spp. nov. Permian America, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949.

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†*Nautilus calvimontensis* sp. nov. Lutetian environs of Paris, P. BÉDÉ Bull. Soc. géol. Fr. 5 18 4/5 1948 p. 220 pl. IXa text-fig. 1.

†*Neodiscosorus* subgen. nov. of *Discosorus* subgenotype *Discosorus* (*Neodiscosorus*) *robustus* sp. nov. Devonian, Germany, O. H. SCHINDEWOLF Jahrb. Reich. Bodenforsch. Berlin 62 1944 p. 521 text-fig. 14 pl. 35 f. 11, pl. 42 f. 3.

†*Paracymatoceras milleri* sp. nov. La Peña formation, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. 60 1 1949 p. 119 pl. 4 f. 1, pl. 5 f. 1-2.

Pseudactinoceras promiscuum gen. et sp. nov. Lower Silesia, O. H. SCHINDEWOLF Jahrb. Reichs. Bodenforsch. Berlin 62 1944 p. 233 pl. 11 f. 1 a-c text-fig. 13.

†*Solenochilus kempae* sp. nov. Permian Wyoming, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 133 pl. 28 f. 3.

†*Stearoceras hesperium* sp. nov. Permian Texas, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 53 pl. 20 f. 1-2.

†*Stenopoceras whitei* sp. nov. Permian Texas, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 76 pl. 5 f. 2, pl. 27 f. 1-7, pl. 28 f. 1-2 text-fig. 22.

†*Tainoceras unklesbayi* sp. nov. Permian Arizona, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 91 pl. 33 f. 1-2.

†*Temnocheilus inaequilaterale* sp. nov. Permian Texas, MILLER & YOUNGQUIST Mem. Geol. Soc. Amer. 41 1949 p. 94 pl. 36 f. 1-4.

†*Tribasoceras kentuckiense* near Farmers, Rowan, Co. Kentucky, Mississippian, MILLER, DOWNS & YOUNGQUIST J. Paleont. Manasha Wis. **23** 6 1949 p. 600 pl. 97 f. 4.

†*Tungkuanoceras* p. 21 *unicum* p. 22 **gen. et sp. nov.** Permian Chêchiang, China, I. HAYASAKI Acta. Geol. Taiwanica **1** 1 1947 pp. 16, 21, 23 pl. 1 f. 3.

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Taonidium pacificum **sp. nov.** Sta. 66 "Arcturus" Oceanographic Expedition 1923 N. of Cocos Id., G. C. ROBSON Zoologica New York **33** 1948 p. 130 f. 14.

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†*Belemnella lanceolata sumensis* **mut. nov.** Srumy. gebeit, Stadt Srumy. J. A. JELETZKY N. Jahrb. Mjm. Geol. Palaont. Stuttgart B9 1949 p. 269 text-figs.

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†*Acanthoplites poteritensis* p. 139 p. 12 f. 11-12; *A. ? adkinsi* p. 139 pl. 13 f. 2-3; *A. ? sandidei* p. 140 pl. 13 f. 1-4; **spp. nov.** La Peña formation Aptian Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. 60 1 1949.

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†*Acanthohoplites* **subfam. nov.**, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949 pp. 95. 108.

†*Acompsoceras spathi* **sp. nov.** Cretaceous Syria, É. BASSE Notes et Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940 p. 452 pl. viii f. 5 a-b.

†*Alpinoceras* **subgen. nov.** *Proarietites* subgenotype *Arietites haueri* (Gümbel) Neumayr 1879, W. LANGE Palaeontographica Stuttgart A93 1-6 1941 p. 47.

†*Anthracoceras ? humphreyi* **sp. nov.** Mississippian 5 m. W.S.W. of Mount Hamilton, Nevada, MILLER, DOWNS & YOUNGQUIST J. Paleont. Menasha Wis. 23 6 1949 p. 101 pl. 99 f. 5-6. 614.

†*Ataxioceras* (*Perisphinctes*?) *saxicolum* p. 5 pl. i f. 1; *A. (P.?) rupiphilum* p. 6 pl. i f. 2; *A. (P.?) litorale* p. 6 pl. i f. 3; *A. semistratum* p. 7 pl. i f. 9-11; *A. scitulum* p. 8 pl. i f. 13; *A. satillum* p. 8 pl. ii f. 1; *A. semi-Guntheri* p. 9 pl. ii f. 2; *A. homalinum* p. 13 pl. v f. 1-2; *A. coitulum* p. 13 pl. v f. 3; *A. didymum* p. 15 pl. v f. 6, 7, 9; *A. pericinctum* p. 16 pl. v f. 12; *A. didymoides* p. 16 pl. v f. 10; *A. conmatum* p. 17 pl. v f. 8; *A. eudiscinum* p. 18 pl. iv f. 1-2; *A. discoidale* p. 19 pl. iv f. 3-6; *A. complanatum* p. 20 pl. vi f. 1-2; *A. prominens* p. 21 pl. ii f. 5-6; *A. patrule* p. 21 pl. viii f. 1-2; *A. striatellum* p. 22 pl. vii f. 4; *A. (Perisphinctes ?) clanculum* p. 23 pl. vi f. 3-6; *A. (Perisphinctes ?) illibatium* p. 24 pl. vii f. 1-3; *A. (Perisphinctes ?) catenatum* p. 26 pl. viii f. 3; *A. (Decipia ?) indigenum* p. 26 pl. viii f. 4; *A. (Decipia ?) lautum* p. 27 pl. viii f. 5-7; *A. maternum* p. 28 pl. ii f. 3; *A. multisetum* p. 29 pl. ii f. 4; *A. (Perisphinctes ?) dolomiticum* p. 29 pl. vii f. 6; *A. (Perisphinctes ?) exortericum* p. 30 pl. vii f. 5; *A. tentaculatum* pp. 31, 33 pl. xii f. 2-4; *A. trichodactylum* p. 32 pl. xi f. 1; *A. excellens* p. 32 pl. xi f. 2-3; *A. arcanum* p. 34 pl. xii f. 5-6;

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†*Bactrites longceameratus* spec. nov. upper Carbon Actyoubinsk, Ayderalash River, Russia, V. N. SHIMANSKI C.R. Acad. Sci. Moscow N.S. 1949 **66** 5 p. 930 fig.; *B. nevadense* **sp. nov.** White Pine shale, Snake Range, Nevada, W. YOUNGQUIST J. Paleont. Menasha Wis. **23** 3 1949 p. 289 pl. 56 fig. 12-15.

†*Beloitoceras grafense* **sp. nov.** Elgin member of the Maquoketa shale [Ordovician] $\frac{1}{2}$ mile S.W. of Graf, Iowa, A. K. MILLER & W. YOUNGQUIST J. Paleont. Menasha Wis. **23** 2 1949 p. 202 pl. 41 f. 1-4.

†*Beudanticeras victoris* **sp. nov.** Lower Cretaceous S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. **38** 1949 p. 127 pl. 18 f. 18-21.

†*Beyrichites praematurus* **sp. nov.** p. 61 pl. 7 f. 5-5a; *B. laurae* **sp. nov.** p. 62 pl. 8 f. 1-16: Lower Trias J. of Chios, C. & O. WENZ Schweiz. Palaeont. Abh. **16** (1948-9) 1948 No. 1.

†*Burckhardtites* **gen. nov.** p. 130 Parahoplitidae, *Neocomites nazaensis* Burckhardt genotype, Upper Aptian, Rio Nazas, Durango, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. **60** 1 1949.

†*Burckhardtites kellumi* p. 131 pl. 10 f. 7-9; *B. gregoriensis* p. 132 pl. 11 f. 3-4; *B. imlayi* p. 134 pl. 11 f. 10-11; *B. palumbes* p. 135 pl. 11 f. 1, 9, pl. 12 f. 1-3; *B. ehlersi* p. 136 pl. 12 f. 4-6: **spp. nov.** Aptian La Peña formation, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. **60** 1 1949.

†*Calycoceras alaouitense* p. 449 pl. viii f. 1-4; *C. paralaouitense* p. 449 pl. vii f. 4 pl. viii f. 2-3 pl. ix f. 3: **spp. nov.** Cretaceous Syrie, E. BASSE Notes et Mem. Haut-Comm. Republ. Franc. Syrie et Au Liban **3** 1940.

†*Chelonicerases fossae* p. 143 pl. 14 f. 1, 5, 6; *C. sanlucasensis* p. 144 pl. 15 f. 4, 5, 7; *C. sellardsi* p. 145 pl. 13 f. 5-6; *C. coahuilensis* p. 146 pl. 14 f. 2-4; *C. inconstans* p. 147 pl. 15 f. 1-2: **spp.**

nov. La Peña formation, Aptian, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. **60** 1 1949.

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†*Chiotites* **subgen. nov.** of *Prospiringites* subgenotype *P. (C.) globularis* **sp. nov.** Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. **66** (1948-9) 1948 No. 1 p. 40 pl. 15 f. 9-9c.

†*Cloniceras* ? *schlaudti* **sp. nov.** Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. **38** 1949 p. 130 pl. 24 f. 4-5.

Clymenia s.l. Notes on the Group and Phylogeny, O. SCHINDEWOLF **815**.

†*Colombiceras* ? *brunale* **sp. nov.** Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. **38** 1949 p. 122 pl. 21 f. 8-10.

†*Columbites europaeus-perrini-smithi* **nom. nov.** = *C. perrini-smithi* Arth. & *C. europaeus* Arth. p. 20 pl. 11 f. 1-26; *C. dianaes* **sp. nov.** p. 21 pl. 10 f. 6-6b Holotype and 7-7b var.; *C. spencei chiotica* **var. nov.** p. 22 pl. 3 f. 7-7b; *C. malayanus crassa* **var. nov.** p. 26 pl. 9 f. 4-4b; *C. bubalinae* **sp. nov.** p. 26 pl. 9 f. 7-7a, pl. 10 f. 1-1b holotype; *C. graeco-americanus* **sp. nov.** p. 27 pl. 10 f. 4-4b; *C. levantinus* **sp. var.** p. 27 pl. 10 f. 2-2b; *C. aithaliae* **sp. nov.** p. 23 pl. 10 f. 3-3b & 5-5b holotype; *C. hellenicus* p. 28 f. 11 f. 9-9c: Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. **66** (1948-9) 1948 No. 1.

†*Cravenoceras merriami* **sp. nov.** White Pine Shale, Snake Range, Nevada, W. YOUNGQUIST J. Paleont. Menasha Wis. **23** 3 1949 p. 291 pl. 61 f. 4-7, pl. 63 f. 9-12.

†*Colombiceras spathi* **sp. nov.** La Peña formation, Aptian, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. **60** 1 1949 p. 151 pl. 18 f. 7-8.

†*Dagnoceras nopesanum involuta* **var. nov.** Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. **66** (1948-9) 1948 p. 52 pl. 1 f. 5-5a.

†*Daradiceras*, genotype *gignouxii* **gen. et sp. nov.** Engonoceratidae, Maestrichtian, Senegal, J. SORNAY & F. TESSIER Bull. Soc. Géol. Fr. 5 19 1-3 1949 pp. 246-247 pl. vii f. 1-4 text-figs. 1 (1-2).

†*Deshayesites*? *temerarius* p. 126 pl. 24 f. 1-3; *D.*? *buileri* p. 126 pl. 25 f. 1-3: **spp. nov.** Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949.

†*Deshayesitinae* **subfam. nov.** for *Deshayesites* Kazansky 1914 and *Dufrenoyia*, Burckhardt 1915, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949 pp. 95 123.

†*Diaziceras* *spathi* p. 107; *D. guillantoni* p. 108 f. 15; *D. menabense* p. 109 f. 16-17; **spp. nov.** V. HOURCQ Ann. Paléont. Paris 35 1949.

†*Dictyoconites nipponicus* **sp. nov.** Upper Triassic, Japan, S. SHIMIZU Jubilee Publ. Com. Prof. H. Yabe 2 1940-1 p. 923 pl. 48-49.

†*Dimorphoceras humphreyi* **sp. nov.** White Pine Shale near Green Springs 8 m. S. of Mt. Hamilton, White Pine Co. Nevada [Mississippian] W. YOUNGQUIST J. Paleont. Menasha Wis. 23 6 1949 p. 614 pl. 100 f. 8-11.

†*Dinarites liatsikasi* **sp. nov.** p. 49 pl. 1 f. 3-3c: Lower Trias I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 p. 49 pl. 1 f. 3-3c.

†*Discohoplites simplex* p. 478 pl. xxviii f. 3 a-b; *D. arkelli* p. 479 pl. xxviii f. 9 a-c; *D. daedallus* p. 480 pl. xxviii f. 5 a-b, 8 a-c, 10 a-c **spp. nov.**; *D. valbonnensis dorsetensis* **subsp. nov.** p. 480 pl. xxviii f. 4 a-c White Notte, Dorset (Cretaceous), C. W. & E. V. WHITE Quart. J. Geol. Soc. London 104 4 1949.

†*Dombarocanites chancharensis* **gen. nov. sp. nov.** from Aktubinsk, Russia, V. E. RUSHENTZEV C.R. Acad. Sci. Moscow N.S. 67 4 1949 pp. 737-740.

Douvilleiceras? *muralense* **sp. nov.** Lower Cretaceous S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949 p. 130 pl. 26 f. 1-2.

†*Dufrenoyia stenzeli* p. 125 pl. 8 f. 9-11; *D. bösei* p. 126 pl. 9 f. 1-2; *D. durangensis* p. 127 pl. 9 f. 3-4; *D. mulatoensis* p. 127 pl. 9 f. 11-12; *B. scotti* p. 128 pl. 9 f. 5-6: **spp. nov.** La Petra formation, Mexico, W. E.

HUMPHREY Bull. Geol. Soc. Amer. 60 1 1949; *D. joserita* p. 125 pl. 23 f. 4-6; *D.*? *compitalis* p. 125 pl. 22 f. 1-8 pl. 23 f. 1-3 **spp. nov.** Lower Cretaceous S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949.

†*Dunveganoceras pondi* **sp. nov.** 6 m. E. and 7 m. N. of Greybull, Wyoming, Cretaceous, A. HAAS Bull. Amer. Mus. nat. Hist. 93 1 1949 pp. 5 22 pl. 8 f. 1-5, 8, pl. 9 f. 1, 3, 4, pl. 10-14 text-figs. 11-13, 16, 17.

†*Enzonhoplitoides khenchelaense* p. 442 pl. iv fig. 6 text-fig. 12; *E. zum-offeni* p. 443 pl. v f. 1 a-b; *E. ricorpense* p. 443 pl. v f. 2 a-b, 3: **spp. nov.** Cretaceous Syria, E. BASSE Notes et Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940.

†*Engonoceras jezzinense* p. 437 pl. iii f. 4 a-b text-fig. 7; *E. jullieni* p. 439 pl. iv f. 4 a-b: **spp. nov.** Cretaceous, Syria, E. BASSE Notes et Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban 3 1940.

†*Epistomina colomi* p. 217 pl. vi f. 4 a, b, c; *E. catenula* p. 219 pl. vi f. 5 a, b, c **spp. nov.** Cretaceous Algeria, G. DUBOURDIEU & T. SIGAL Bull. Soc. géol. Fr. 5 19 1-3 1949.

†*Esericeras longoviciense* **sp. nov.** Aalinian Mont-Saint-Martin (M. et M.), P. L. MAUBEUGE Bull. Mus. Hist. nat. Belg. 24 18 1948 p. 5.

†*Eulophoceras bererense* p. 91 f. 1-2; *E. miloni* p. 93 f. 3; *E. besairici* p. 94 f. 5; *E. jacobi* p. 95 f. 6-7; *E. manambolense* p. 96 f. 8; **spp. nov.** Senonian, Portugal, V. HOURCQ Ann. Paléont. Paris 35 1949; *E.* list of species; V. HOURCQ 379.

†*Flemingites pseudorusselli* Lower Trias, Isle of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1 p. 54 pl. 7 f. 3, 3c.

†*Flickia rudelli* **sp. nov.** Cenomanian Algeria, DUBOURDIEU & J. SIGAL Bull. Soc. Géol. Fr. 5 19 1-3 1949 p. 214 pl. vi f. 1-3 text-figs. 1-2.

†*Gagaticeras gagateum alticostata* p. 303 pl. 16 f. 4-4a, pl. 17 f. 6 text-fig. 61; *G. g. angusticostata* p. 304 pl. 16 f. 5-5a text-fig. 7 **vars. nov.** Lower Lias N.W. Germany, K. HOFFMANN Jahrb. Reich. Bodenforsch. Berlin 62 1944.

†*Gagaticeras intercedens* sp. nov. Lower Lias N.W. Germany, K. HOFFMANN Jahrb. Reichs. Bodenforsch. Berlin **62** 1944 p. 307.

†*Gauthiericeras mutiscuaensis* sp. nov. Cretaceous, Colombia (S. Am.), É. BASSE Bull. Soc. geol. Fr. **5** 18 8-9 1948 p. 697 pl. xxv f. 6 a-c.

†*Glyphioceras myrtilense* sp. nov. Upper Viséan, Portugal, M. FEIO Comm. Serv. geol. Portugal **27** 1946 p. 112 pl. ii f. 6-7 text-fig. 3.

†*Goniptychoceras* gen. nov. Psiloceratidae genotype *Aegoceras goniptychum* Wahner 1886, W. LANGE Palaeontographica, Stuttgart **A93** 1-6 1941 p. 47.

†*Hedenstroemia pityoussae* sp. nov. Lower Trias, I. of Chios, G. & O. RENZ Schweiz. Palaeont. Abh. **66** (1948-9) 1948 No. 1 p. 83 pl. 16 f. 8-8b.

†*Hemilytoceras lemoinei* sp. nov. Oxfordian, Madagascar, M. COLLIGNON Ann. Hébert & Hang Paris **7** 1949 p. 92.

†*Hellenites* gen. nov. genotype ? *Tropicellites praematurus* Arthaber Trias, C. & O. RENZ Schweiz. Palaeont. Abh. **66** (1948-9) 1948 No. 1 p. 44 pl. 2 7-7a type and f. 3, 3a.

Hellenites p. aegaeica var. nov. p. 45 pl. 2 f. 6, 6b, 8, 8b, 9-9a; *H. trikkalinoi* sp. nov. p. 46 pl. 2 f. 1, 1a, 2-2a holotype 4, 4b var.; *H. t. graeca* var. nov. p. 46 pl. 2 f. 5-5b; *H. (Pallasites) radiatus* sp. nov. p. 47 pl. 2 f. 12-12b holotype f. 13-13b; *H. (P.) striatus* sp. nov. p. 47 pl. 2 f. 11-11a holotype; *H. (P.) s. densicostata* var. nov. p. 48 pl. 2 f. 10-10b. Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. **66** (1948-9) 1948 No. 1.

Hexagonites gen. nov. pp. 16, 19 *chechiangensis* sp. nov. pp. 16, 19, 20 pl. 1 f. 2 text-fig. 1. Permian Chêchiang, China, I. HAYASAKI Acta. Geol. Taiwanica **1** 1 1947.

†*Hinnites primoevus* Matheron in collect' Lias Provence, J. ALLOITEAU & R. P. CHARLES Mém. Soc. d'Etudes Paléont. Paléonogr. Provence **1** 2 1948 p. 8.

Holeostiphanus utriculus "Matheron" sp. nom. and 1878 = *Ammonites utriculus* Matheron Rech. Paléo, "dans le Midi de la Fr." 2° parties pl. B. 20

fig. 5, R. P. CHARLES Mém. Soc. d'Etudes Paleont. Pathnogr. **1** 1 1948 p. 31.

†*Hypacanthoplites leanzae* p. 141 pl. 13 f. 7-9; *H. ? rursiradiatus* p. 142 pl. 14 f. 11-12: spp. nov. La Peña formation, Aptian, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. **60** 1 1949. 384.

†*Hypophoplites costosus* p. 484 pl. xxix f. 7, a-b; *H. pylorus* p. 488 pl. xxix f. 2 a-b spp. nov. Dorset; *H. falcatus interpolatus* p. 485 pl. xxx f. 2, 6, 7 var. nov. type Sedgwick Mus. G.S.M. 43805 Cretaceous, C. W. & E. V. WHITE Quart. J. Geol. Soc. London **104** 4 1949.

†*Imitoceras eshbaughi* sp. nov. Mississippian, Fern Glen, St. Louis, Co. Missouri, MILLER, DOWNS & YOUNGQUIST J. Paleont. Menasha Wis. **23** 6 1949 p. 604 pl. 99 f. 11. 614.

†*Immunitoceras* gen. nov. pp. 95, 116 Parahoplitidae genotype *I. immunitum* sp. nov. p. 117 pl. 20 f. 8-15 Lower Cretaceous Quajote Member, Lower formation, Ninety One Hills, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. **38** 1949.

†*Inyortes garbinus* sp. nov. Lower Trias, I. of Chios, G. & O. RENZ Schweiz. Palaeont. Abh. **66** (1948-9) 1948 No. 1 p. 53 pl. 12 f. 10-10b.

†*Iscultites globulus* sp. nov. & var. p. 35 pl. 14 f. 10-10c holotype f. 4-4a, 5-5a (form path) Sowie var. f. 8-8a, 11-11b; *I. globulus-originitis* nom. nov. p. 35 p. 13 f. 6-6a pl. 14 f. 1-1a, 2-2a, 3-3a; *I. globulus-antiglobulus* nom. nov. p. 35 pl. 13 f. 4-4a pl. 14 f. 7-7a; Lower Trias, Island of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. **66** (1948-9) 1948 No. 1.

†*Kammerkaroceras* gen. nov. Psiloceratidae, genotype *Aegoceras (Psiloceras) emmrichi* (Gümbel) Wäknér 1886 W. LANGE Palaeontographica, Stuttgart **A93** 1-6 1941 p. 43.

†*Kazanskyella* gen. nov. pp. 95, 99 Parakoplitidae genotype *K. arizonica* sp. nov. p. 100 pl. 17 f. 2-8 Cienda limestone, Packeta member, Lower formation, Ninety One Hills, Lower Cretaceous S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. **38** 1949.

†*Knemicerias arambourgi* p. 426 pl. 1 f. 2 a-b; *K. dubertreti* p. 427 pl. 1 f. 3-4, ii f. 1-2 text-fig. 2 a-b; *K.*

flexilocolosum p. 430 pl. ii f. 3 a-b; *K. subcomplicatum* p. 434 pl. iii f. 2-3 a-b: spp. nov.; *K. uhligi douvillei* var. nov. p. 431 pl. iii f. 1: Cretaceous, Syria, E. BASSE Notes et Mém. Haut-Comm. Républ. Franc. Syrie et Au Liban. 3 1940.

†*Knemiceras compressum* Hyatt. its occurrence in the Aptian Algeria fig., G. DUBOURDIEU 222.

†*Koninckites bernoullii* sp. nov. p. 58 pl. 5 f. 5-5a pl. 6 f. 2-2a (holotype); sowie var. p. 7 f. 2-2a Lower Trias, I. of Chios; *K. timorensis* "nom. nov." p. 60 = *Proptychites* nov. sp. ind ex aff. *undati* Waagen in O. weter. Amm. umter. Trias Timor 1922, G. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1949 No. 1.

†*Kosmoclymenia* nom. nov. for *Oxyclymenia* Gümbel non Hyatt. genotype *K. undulata* (Münster 1832), O. SCHINDewolf N. Jahrb. Mem. Geol. Paläont. Stuttgart B1-3 1949 pp. 69-70.

†*Ludwigia decipiens hiltermanni* subsp. nov. p. 34 pl. vi f. 4-7 text-figs. D6-10 Bielefeld; *L. obtusa planiomphalata* p. 16 p. 1 f. 12-13 text-figs. A17-18; *L. obtusa fulcifera* p. 17 pl. ii f. 1-3 text-figs. A 21-24, B 1-2; *L. obtusa schoneuegi* p. 17 pl. ii f. 4 text-fig. A 19-20; *L. obtusa latecostata* p. 18 pl. ii f. 5, iii f. 1 text-figs. A25-26, B3-4; *L. concava oligopleura* p. 28 pl. v f. 14 text-figs C 26-27, formae. nov. Bielefeld, W. ALTHOFF Palaeontographica Stuttgart A92 1-2 1940; *L. (Hyperlioceras)*, *L. (Harpoceras)*, *L. (Staufferia)*, *L. (Lioceras)*, spp. in Wurttemberg—Jurassic, E. LÖRCHER 552.

Manumbolites gen. nov. ? Sphenodiscidae genotype *M. piveteaui* sp. nov. middle and upper Campanian, near Anhilizato, Madagascar, V. HOURCQ Ann. Paléont. Paris 35 1949 pp. 111-113 figs. 20-23.

†*Mantelliceras canitaurinum* sp. nov. Cretaceous 6 m. E. and 7 m. N. of Greybull, Wyoming, O. HAAS Bull. Amer. Mus. nat. Hist. 93 1 1949 pp. 5, 9 pl. 1-3, pl. 4 f. 1, 2, 4 text-figs. 1-4.

†*Megatyloceras* gen. nov. Cheloniceratidae genotype *Douvilleieras coronatum* Rouchadze. Aptian, Mexico with *M. casei* p. 149 *M. cascá* sp. nov. La

Peña formation, Aptian, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. 60 1 1949.

†*Meropella* subgen. nov. of *Arianites* subgenotype *A. (M.) plejanæ* sp. nov. Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. p. 95 pl. 3 f. 4-1 (subgen. and Holotype) als. f. 11-11b. Lower Trias, Isle of Chios, G. & O. Renz Schweiz. Palaeont. Abh. 66 (1948-49) 1948 No. 1.

†*Metoicoceras whitei praecox* subsp. nov. Cretaceous 6 m. E. and 7 m. N. of Greybull, Wyoming, O. HAAS Bull. Amer. Mus. nat. Hist. 93 1 1949 pp. 5, 15 pl. 5-7 text-figs. 5-9.

†*Metasageceras* subgen. nov. of *Pseudosageceras* subgenotype *P. (M.) pasquayi* sp. nov. Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1 p. 93 pl. 16 f. 2-2b.

†*Monophyllites (Leiophyllites) praecconfucii* sp. nov. p. 73 pl. 4 f. 1-1b, 2-2a; *M. (L.) georgalasi* sp. nov. p. 74 p. 4 f. 3-3a; *M. (L.) rosae* sp. nov. p. 74 pl. 3 f. 8-8a; *M. (L.) dieneri involuta* var. nov. p. 75 pl. 5 f. 1-1b; *M. (L.) palaeotriadicus* sp. nov. p. 75 p. 4 f. 4-4a: Lower Trias, Isle of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1; *M. (Schizophyllites) bettoni* sp. nov. p. 76 pl. 4 f. 8-8b and *evoluta* var. nov. p. 76 pl. 4 f. 6-6a, pl. 5 f. 2-2a, 4-4a, 6-6a; *M. (S.) pseudohara* sp. nov. p. 78 pl. 5 f. 3-3b; *M. (Palaeophyllites) thalmani* sp. nov. p. 79 pl. 3 f. 10-10b; *M. (P.) praekiepti* sp. nov. p. 80 pl. 4 f. 5-5b: Lower Trias, Isle of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1.

†*Mooreoceras depressum* sp. nov. White Pine Shale, Snake Range, Nevada, W. YOUNGQUIST J. Paleont. Menasha Wis. 23 3 1949 p. 283 pl. 56 f. 10-11.

†*Neophyllites* gen. nov. Psiloceratidae genotype *N. antecedens* sp. nov. W. LANGE Palaeontographica Stuttgart A93 1-6 1941 p. 37; *N. antecedens glaber* subsp. nov. p. 56 pl. 1 f. 1b-4b; holotype and f. 3; *N. sulcifer* sp. nov. p. 57 pl. 1 f. 5 text-fig. 12 holotype. pl. 1 f. 1c, 4c text-figs. 11-13; *N. imitans* pl. 58 pl. 1 f. 8 and text-fig. 23 holotype, pl. 6-8 text-figs. 14-22; *N. biptychus* sp. nov. p. 60 pl. ii f. 1 text-

figs. 24-25 holotype; *N. biptychus intermedius* subsp. nov. p. 61 pl. ii f. 2 holotype; North Germany, W. LANGE Palaeontographica Stuttgart A93 1-6 1941.

†*Neptunoceras sakmarensense* gen. nov. spec. nov. upper Carbon Tchkalovsk. distr. Sakmara river, V. N. SHIMANSKI C.R. Acad. Sci. Moscow N.S. 1949 66 5 p. 931 figs.

†*Niceforoceras* gen. nov. p. 694 genotype *Niceforoceras columbianus* sp. nov. p. 694 pl. xxv f. 2; with *N. umbulaziforme* sp. nov. p. 695 pl. xxv f. 3 a-b to 5 a-b, Cretaceous, Colombia (S. Am.), E. BASSE Bull. Soc. géol. Fr. 5 18 8-9 1948.

†*Oxynticeras galeatum* sp. nov. Lower Lias N.W. Germany, K. HOFFMANN Jahrb. Reichs. Bodenforsch. Berlin 62 1944 p. 330 pl. 19 f. 3-7 text-figs. 23-24.

†*Paraberriasella* gen. nov. Perisphinctidae genotype *blondeti* sp. nov. Lower Tithonian of Saint Concors near Chambéry, France, P. DONZE Bull. Soc. géol. Fr. 5 18 4-5 1948 p. 237 pl. ix text-figs. 1-2.

†*Paracanthoplites* gen. nov. p. 95, 118 Parahoplitidae, genotype *P. meridionalis* sp. nov. p. 118 pl. 21 f. 1-7 Lower Cretaceous S.E. Arizona, A. STOYANOW Men. Geol. Soc. Amer. 38 1949.

†*Paracibolites* p. 32 *costatus* p. 33 gen. et sp. nov. Permian Chéckiang, China, I. HAYASAKI Acta Geol. Taiwanica 1 1 1947 pp. 17, 32, 33 pl. ii f. 6-7 text-fig. 5.

†*Parahoplites mexicanus* sp. nov. La Peña formation, Aptian, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. 60 1 1949 p. 137 pl. 12 f. 7-8.

†*Paranannites mediterraneus media* var. nov. p. 70 pl. 1 f. 11, 11b, 14-14b; *P. chionensis* sp. nov. p. 70 pl. 1 f. 10-10c; *P. aspenensis europaea* var. nov. p. 71 pl. 1 f. 16-16c; *P. compressus* sp. nov. p. 71 pl. 1 f. 15-15b. Lower Trias, Is. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-49) 1948 No. 1.

†*Paraspidoceras erardae* sp. nov. Oxfordian, Madagascar, M. COLLIGNON Ann. Hébert & Haug, Paris 7 1949 p. 93.

†*Pedioceras apollinaria* sp. nov. Cretaceous, Colombia (S. Am.), E. BASSE Bull. Soc. géol. Fr. 5 18 8-9 1948 p. 691 pl. xxv f. 1 a-c.

†*Pedioceras* suture line figured confirming Dr. Roger's observations of its Synonymy with *Crioceras* (*Pseudocrioceras*), K. A. YENNE pl. 102 1014.

†*Perisphinctes* (*Arisphinctes*) *plicatilis* Sow. fig. study of the genus, V. FRADIN 270; *P. broaneii* fig., K. V. PETKOVIC 693.

†*Phylsiogrammoceras anhense* p. 10 pl. i f. 1; *P. beneckeii* p. 10 pl. i f. 2; *P. klüpfeli* p. 11 pl. i f. 3; *P. bichelonnei* p. 11 pl. i f. 4; *P. crinitum* p. 12 pl. ii f. 2; *P. braconnieri* p. 13 pl. ii f. 5; *P. bleickeri* p. 13 pl. i f. 5; *P. discoideum* p. 14 pl. ii f. 3; *P. angoti* p. 15 pl. ii f. 4: spp. nov. the Aalinian from the mine of Mont St. Martin [? France-Luxemburg border] P. L. MAUBEUGE Bull. Inst. R. Sci. nat. Belgian 1949 25 36.

†*Phylsiogrammoceras* Buckman genotype, *P. metallarium* Dumotier sp. 1874, a revision of the genus, P. L. MAUBEUGE 590.

†*Pradoceras* (*Kotoceras*) *kobayashi* sp. nov. Ordovician Ciudad Real, Spain, P. H. SAMPelayo Bol. Inst. Geol. Esp. 61 1948 p. 47.

†*Praedaraelites aktubensis* sp. nov. from Aktubinsk, Russia, V. E. RUSHENTZEV. C.R. Acad. Sci. Moscow N.S. 67 4 1949 pp. 737-740.

†*Prenkites helenae* sp. nov. Lower Trias, Island of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1 p. 30 pl. 12 f. 2-2a holotype and f. 5-5b.

†*Proarietites platysternus calliptychus* p. 157 pl. xvii f. 6 holotype; *P. (Alsatites) loqueolus platystoma* p. 163 pl. xx f. 4 holotype: subsp. nov. *P. (Alsatites) costulatus* sp. nov. p. 165 pl. xx f. 6 a-b text-fig. 138 holotype; *P. (A.) gallbergensis* sp. nov. p. 167 pl. xx f. 7 holotype, Ammonites "Psiloceras Stufe," N. Germany, W. LANGE Palaeontographica Stuttgart A93 1-6 1941.

†*Procarnites kokeni evoluta* var. nov. p. 82 pl. 9 f. 1-1a; *P. k. panteleimonensis* var. nov. p. 82 pl. 8 f. 3-3a.

pl. 9 f. 3-3a. Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. II (1948-9) 1948 No. 1.

†*Pronorites arbanus mediterranea* var. nov. p. 85 pl. 14 f. 12-12b; *P. orientalis* sp. nov. p. 86 pl. 15 f. 2-2b; *P. scharubi* sp. nov. p. 87 pl. 15 f. 4-4a; *P. s. kephalovanensis* var. nov. p. 87 pl. 15 f. 3, 3a; *P. reicheli* sp. nov. p. 88 pl. 15, f. 1-1c: Lower Trias, Isle of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. II (1948-9) 1948 No. 1.

†*Prospingites ronderschmitti* sp. nov. p. 39 pl. 15 f. 13-13c & 15-15b; *P. (Chiotites* subgen. nov.) *globularis* sp. nov. p. 40 pl. 15 f. 9-9c; *P. (C.) superglobosus* sp. nov. p. 41 pl. 15 f. 7-7b holotype, & f. 10; *P. (Zenoides* subgen. nov.) *helenae* p. 41 pl. 15 f. 8-8a & pl. 16 f. 1-1c subgen., and holotype; *P. (Z.) helenae maradovemensis* var. nov. p. 42 pl. 15 f. 12, 12a, 14-14b: Lower Trias, Island of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1048 No. 1.

†*Proptychites mohamedis applanata* var. nov. p. 64 pl. 6 f. 3-3b; *P. ktenasi* sp. nov. p. 65 pl. 6 f. 1-1b; *P. balcanicus* sp. nov. p. 66 pl. 5 f. 9-9b; *P. mistardisi* sp. nov. p. 67 pl. 5 f. 8-8a; *P. lawrencianus postindica* mut. nov. p. 67 pl. 5 fig.; *P. buxtorfi* sp. nov. p. 68 pl. 7 f. 1-1b: Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 1948-9 1948 No. 1.

†*Protacanthoceras jacobi* sp. nov. Cenomanian, Spain, M. COLLIGNON Ann. Hébert & Haug Paris 7 1949 p. 80 fig.

†*Proteites (Proteusites) levis* sp. nov. Calcaire, Seljani à Riva, Z. BEŠIĆ Bull. Mus. H.N. Serb. 2 1949 pp. 135, 148 pl. x f. 2-4 pl. xi f. 3.

†*Pseudohaploceras? hedbergi* sp. nov. La Peña formation, Aptian, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. 60 1 1949 p. 155 pl. 18 f. 11, 12.

†*Pseudosagceras drinense incentrolata* var. nov. p. 92 pl. 16 f. 11-11a; *P. (Metasagceras) pasquayi* sp. nov. p. 93 pl. 16 f. 2, 2b, Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1.

†*Psiloceras (Waekneroceras) engonirum* Lange pl. iii f. 5, 6 typical, e. *juengsti* pl. iii f. 7 text-figs. 67a, e. *polystreptum*, e. *depressum* pl. iii f. 8 text-fig. 67b: subsp. nov. p. 82; *P. (W.) helmstad-*

teuse westfalicum subsp. nov. p. 84 pl. iii f. 11 text-fig. 69 holotype; *P. (Caloceras) torus bielefeldiense* subsp. nov. p. 95 pl. vii f. 9a-b text-fig. 76 holotype; *P. (C.) torus celerecrescens* subsp. nov. p. 95 pl. x f. 3 text-fig. 77 holotype; *P. (C.) torus* Orb. f. *aegrum* p. 101 pl. vii f. 12; *P. (C.) torus stenogastor-biangulum* subsp. nov. p. 102; *P. (C.) torus stenogastor-acutum* subsp. nov. p. 103 pl. ix f. 14 holotype; *P. (C.) torus stenogastor-polyantyx* subsp. nov. p. 104 pl. ix f. 2a-b holotype; *P. (C.) torus stenogastor-minor* subsp. nov. p. 105 pl. ix f. 4 holotype, pl. ix f. 3, 5-7 text-fig. 80, W. LANGE Palaeontographica Stuttgart A93 1-6 1941; *P. c.f. helmstedtense* Jüngst fig., C. KÜHN 480.

†*Psilophyllites hagenowi incisus* subsp. nov. (bradymorph form) p. 67 pl. ii f. 5 text-fig. 37=holotype pl. ii f. 6, 14 text-figs. 29, 35, 36, 38; *P. hagenowi dunkeri* subsp. nov. p. 69 pl. ii f. 8 and text-figs. 30, 46=holotype and text-figs. 44 bis 47; *P. hagenowi latelobus* subsp. nov. p. 70 pl. ii f. 9 text-fig. 48 holotype and f. 49; *P. hagenowi undulatus* p. 71 pl. ii f. 11 text-fig. 52 holotype; *P. hagenowi colubrina* subsp. nov. p. 71 pl. ii f. 12 text-fig. 53 holotype; *P. hagenowi divisus* subsp. nov. p. 71 pl. ii f. 13 text-fig. 56 holotype, and text-fig. 55; *P. hagenowi vaikingensis* subsp. nov. p. 72 pl. ii f. 16 text-fig. 54 holotype; *P. ornatus* sp. nov. p. 73 pl. ii f. 4 text-fig. 57 holotype; *P. psilonotum striatulum* subsp. nov. p. 76 pl. ii f. 19 holotype. W. LANGE Palaeontographica A93 1941.

†*Ptychites gorjanovic-krambergeri* sp. nov. Trias, M. ŠALOPEK Prirod. Istraž. mat.-prirod. Razred. 4 1914 p. 21 pl. iv pl. v f. 1 a-b, pl. vi f. 2.

†*Rhipaeocanites librovitchi* gen. et sp. nov. Aktubinsk, Russia, V. E. RUSHENTZEV C.R. Acad. Sci. Moscow N.S. 67 4 1949 p. 737-740.

†*Saxoceras schroederi insulcatum* subsp. nov. p. 125 pl. xi f. 4 text-fig. 103 holotype; *S. s. gottlingense* p. 128 pl. xi f. 5 holotype; *S. s. striatum* p. 128 pl. xi f. 6 text-fig., 10a holotype subsp. nov.; *S. stolleyi* sp. nov. p. 128 pl. xii f. 3 text-fig. 105 holotype; *S. andersbachense* sp. nov. p. 130 pl. xii f. 1 (2 and text-fig. 106 holotype); *S. costatum polyrhaddum* subsp. nov. p. 132 pl. iv f. 3, pl. xiii 5 holotype, pl. xiii; *S. c. quadratum* p. 134 pl. xiii

f. 7 text-fig. 110 holotype; *S. c. hypositum* p. 135 pl. xiii f. 8 holotype, pl. xiii f. 9, xiv f. 1 text-figs. 111, 112; *S. c. hypseum* p. 135 pl. xiv f. 3, xiv f. 5 holotype; *S. c. staghornense* p. 135 xiv f. 2 text-fig. 113 holotype: **subsp. nov.**; *S. praecursor polyplectum* p. 141 pl. xiv f. 10 holotype text-fig. 119; *S. praecursor latum* p. 141 pl. xv f. 10 holotype xvi f. 1 text-fig. 120: **subsp. nov.**; *S. tentobergense* [olim *Schlotheimia*] p. 144 pl. xvi f. 2 text-fig. 121 holotype, xvi f. 3; *S. haploptychoides deinoptychum* p. 147 pl. xvi f. 8 holotype **subsp. nov.** Ammonites, N. Germany, W. LANGE Palaeontographica Stuttgart A93 1-6 1941.

†*Scaphites morrowi* **nom. nov.** fom *Scaphites pygmaeus* Morrow 1935 non Holzapfel 1888, J. A. JELETZKY J. Paleont. Menasha Wis. 23 3 1949 p. 330. 413

†*Schaphautlia carinata* **sp. nov.** Upper Trias, Hoa-Huynh, S. Annam, E. SAURIN Bull. Surv. geol. Indochine 26 3 1941 p. 11 pl. ii f. 21 text-fig. 2.

†*Schizophyllites* **subgen. nov.** of *Monophyllites* subgenotype M. (*S.*) *betilloni* **sp. nov.** p. 76 pl. 4 f. 8-8b holotype, also var. *evoluta* [**var. nov.**] pl. 4 f. 6-6a pl. 5 f. 2-2a f. 4-4a 6-6a, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1.

†*Sinzowiella* **gen. nov.** pp. 95, 101, Parahoplitidae, genotype *S. spathi* **sp. nov.** p. 102 pl. 18 f. 1-17, Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949.

†*Sphenodiscus corroyi* **sp. nov.** Maestrichtian, Senegal, J. SORNAY & F. TESSIER Bull. Soc. géol. Fr. 5 19 1-3 1949 p. 248 pl. vii f. 10-11 text-figs. f. 1 (3-4).

†*Spitidiscus* (*Holcodiscus*) *rossfeldensis* p. 263 pl. xii f. 1 pl. xiv f. 3 text-fig. 2; *S. (H.) pechhaeuslensis* p. 267 pl. xii f. 2 text-fig. 3: **spp. nov.** Rossfeld,

E. WEBER N. Jahrb. Min. Geol. Paläont. Stuttgart 86 2 1942.

†*Stacheites dionysi* **sp. nov.** Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1 p. 50 pl. 1 f. 6-6b holotype and var. f. 8-8b.

†*Stacheoceras quadridens* **sp. nov.** Permian, Chêchiang, China, I. HAYASAKI Acta Geol. Taiwanica 1 1 1947 pp. 16, 23 pl. ii f. 1 text-fig. 3.

†*Stoliczkaia patagonica* p. 128 pl. 26 f. 3-4; *S. scotti* p. 129 pl. 26 f. 7-8: **spp. nov.** Lower Cretaceous, S.E. Arizona, A. STOYANOW Mem. Geol. Soc. Amer. 38 1949.

†*Storthoceras* **gen. nov.** Psiloceratidae, genotype *Aegoceras extracostatum* Wäbner, W. LANGE Palaeontographica Stuttgart A93 1-6 1941 p. 41.

†*Tetrapleuroceras karpinskyi* **gen. nov.** **spec. nov.** Upper Carbon, Tehkaloyisk district, Ural river, V. N. SHIMANSKI C.R. Acad. Sci. Moscow N.S. 1949 66 5 p. 931 figs.

†*Uhligella subornata* Middle Albian, Folkestone p. 337 pl. xix f. 1a-b text-fig. 1; *U. derancei*, Lower Gault, Foreshore reefs, E. Wear Bay, Folkestone p. 340 pl. xix f. 2a-d, 3a-b: **spp. nov.** Cretaceous, R. CASEY Geol. Mag. London 86 6 1949; *U. reesidei* p. 152 pl. 18 f. 3-4; *U. mullerriedi* p. 153 pl. 18 f. 10, 13; *U. riedeli* p. 153 pl. 18 f. 1, 2: **spp. nov.** La Peña formation, Aptian, Mexico, W. E. HUMPHREY Bull. Geol. Soc. Amer. 60 1 1949.

Witchellia (*Dorsetensia*) *complanata* Buckman, Basel, figs., E. KOECHLIN 466.

†*Zenoites* **subgen. nov.** of *Prosphingites*, subgenotype *P. (Z.) helenae* **sp. nov.** Lower Trias, I. of Chios, C. & O. RENZ Schweiz. Palaeont. Abh. 66 (1948-9) 1948 No. 1 p. 41 pl. 16 f. 1-1c.

